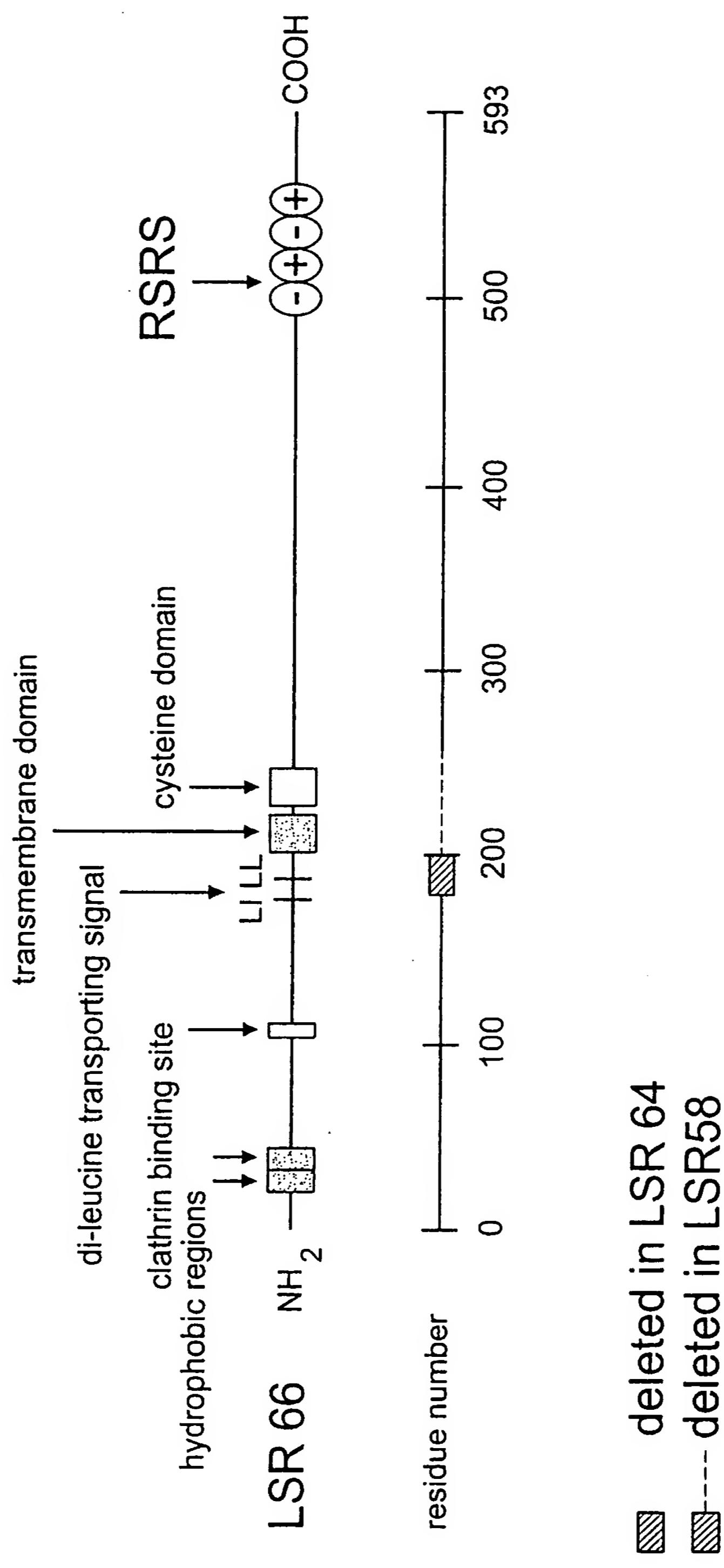


FIG. 1



LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

MQQDGLGVGTRNGSGKGRSVHPSWPWCAPRPLRYFGRDARARRAQTAAMALLAGGLSRGL
----- MAPAAGACAGAP
----- MAPAASACAGAP

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

GSHPAAAGRDAVVFWLLLSTWCTAPARAIQVTVSNPYHVVILFQPVTLPCTYQMTSTPT
DSHPAT-----VVFVCLFLIIIFCPDPASAIQVTVSDPYHVVILFQPVTLPCTYQMSNTLT
GSHPAT-----TIFVCLFLIIYCPDRASAIQVTVPDPYHVVILFQPVTLHCTYQMSNTLT

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

QPIVIWKYKSFCRDRIADAFSPASVDNQLNAAGNPGYNPYVECQDSVRTVRVVATKQ
VPIVIWKYKSFCRDRIADAFSPASVDNQLNAAGNPGYNPYVECQDSVRTVRVVATKQ
APIVIWKYKSFCRDRVADAFSPASVDNOLNAOLAAGNPGYNPYVECQDSVRTVRVVATKQ

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

GNAVTLGDYYQGRRITITGNADLTQAWGDSGVYYCSVVSAQDLQGNNEAYAELTVLG
GNAVTLGDYYQGRRITITGNADLTQAWGDSGVYYCSVVSAQDLQGNNEAYAELTVLG
GNAVTLGDYYQGRRITITGNAGLTFEQAWGDSGVYYCSVVSAQDLQGNNEAYAELTVLG

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

RTSGVAEELPGFQAGPIEDWLFVVVVCLAAFLIFLLLGIWCQCCPHTCCCCYVRCPCCPD
RTSEAPEELPGFRAGPLEDWLFVVVVCLASLLLFLLLGIWCQCCPHTCCCCYVRCPCCPD
RTSEAPEELPGFRAGPLLEDWL.FVVVVCLASI.LEELL.LGIWCQCCPHTCCCCYVRCPCCPD

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

KCCCPEALYAAGKAATSGVPSIYAPSTYAHLSPEAKTPPPP-AMIPMGPAYNGYPGGYPGD
KCCCPEALYAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPPAMIPMGPPY-----GYPGD
KCCCPEALYAAGKAATSGVPSIYAPSTYTHLSPAKTRRRRRRPMIPMBRRY GYPGD

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

VDRSSSAGGQGSYVPLLRTDSSVASEVRSGYRIQASQQDDSMRVLYYMEKELANFDPSR
FDRHSSVGGHSSQVPLLRTDGSVSSEVRSGYRIQANQQDDSMRVLYYMEKELANFDPSR
EDRTSSVGGHSSQVPLLRTDGSVSSEVRSGYRIQANQQDDSMRVLYYMEKELANFDPSR

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mn (SEQ ID NO:16)

PGPPSGRVERAMSEVTSLHEDDWRSRPSRGPALTPIRDEEWGGHSPRS PRGWDQE PAREQ
PGPPNGRVERAMSEVTSLHEDDWRSRPSRAPALTPIRDEENRHSPQSPRTWEQEPLQEQ
PGPPNGRVERAMSEVTSLHEDDWRSRPSRAPALTPIRDEENRHSPQSPRTWEQEPLQEQ

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.M (SEQ ID NO:1)

AGGGWRARRPRARSVDALDDLTTPSTAESGSRSPTSNNGGRSRAYMPPRSRSRDDL YDQDD
PRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPERSRSRDDL YDPDD
PRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPERSRSRDDL YDPDD

FIG. 2A

LSR1.Hs (SEQ ID NO:8)
LSR1.Rn (SEQ ID NO:2)
LSR1.Mm (SEQ ID NO:16)

FIG. 2B

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

MQQDGLGVGTRNGSGKGRSVHPSWPWCAPRPLRYFGRDARARRAQTAAAMALLAGGLSRGL
MQQDGLGVGTRNGSGKGRSVHPSWPWCAPRPLRYFGRDARARRAQTAAAMALLAGGLSRGL
MQQDGLGVGTRNGSGKGRSVHPSWPWCAPRPLRYFGRDARARRAQTAAAMALLAGGLSRGL

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

GSHPAAAGRDAVVFWLLLSTWCTAPARAIQVTVSNPYHVVILFQPVTLPCPTYQMTSTPT
GSHPAAAGRDAVVFWLLLSTWCTAPARAIQVTVSNPYHVVILFQPVTLPCPTYQMTSTPT
GSHPAAAGRDAVVFWLLLSTWCTAPARAIQVTVSNPYHVVILFQPVTLPCPTYQMTSTPT

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

QPIVIWKYKSFCDRIADAFSPASVDNQLNAQLAAGNPGVNPYVECQDSVRTRVVVATKQ
QPIVIWKYKSFCDRIADAFSPASVDNQLNAQLAAGNPGVNPYVECQDSVRTRVVVATKQ
QPIVIWKYKSFCDRIADAFSPASVDNQLNAQLAAGNPGVNPYVECQDSVRTRVVVATKQ

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

GNAVTLDYYQGRRITITGNADLTDFQTAWGDSGVYYCSVVAQDLQGNNEAYAELIVLG
GNAVTLDYYQGRRITITGNADLTDFQTAWGDSGVYYCSVVAQDLQGNNEAYAELIVL-
GNAVTLDYYQGRRITITGNADLTDFQTAWGDSGVYYCSVVAQDLQGNNEAYAELIVL-

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

RTSGVAELIPGFQAGPIEDWLFVVVVCLAAFLIFLLLGIWCQCCPHTCCCYVRCPCCPD
-----DWLFVVVVCLAAFLIFLLLGIWCQCCPHTCCCYVRCPCCPD

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

KCCCPEALYAAGKAATSGVPSIYAPSTYAHLSPAKTPPPPAMIPMGPAYNGYPGGYPGDV
KCCCPEALYAAGKAATSGVPSIYAPSTYAHLSPAKTPPPPAMIPMGPAYNGYPGGYPGDV
-----VYAAGKAATSGVPSIYAPSTYAHLSPAKTPPPPAMIPMGPAYNGYPGGYPGDV

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

DRSSSAGGQGSYVPLLRDSSVASEVRSGYRIQASQQDDSMRVLYYMEKELANFDPSRP
DRSSSAGGQGSYVPLLRDSSVASEVRSGYRIQASQQDDSMRVLYYMEKELANFDPSRP
DRSSSAGGQGSYVPLLRDSSVASEVRSGYRIQASQQDDSMRVLYYMEKELANFDPSRP

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

GPPSGRVERAMSEVTSLHEDDWRSRPSRGPALETPIRDEEWGGHSPRSRGWDQEPAEQ
GPPSGRVERAMSEVTSLHEDDWRSRPSRGPALETPIRDEEWGGHSPRSRGWDQEPAEQ
GPPSGRVERAMSEVTSLHEDDWRSRPSRGPALETPIRDEEWGGHSPRSRGWDQEPAEQ

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

GGGWRARRPRARSVDALDDLTPSTAEGSRSPSTSNGGRSRAYMP
GGGWRARRPRARSVDALDDLTPSTAEGSRSPSTSNGGRSRAYMP
GGGWRARRPRARSVDALDDLTPSTAEGSRSPSTSNGGRSRAYMP

FIG. 3A

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

RDFPRSRDPHYDDFRSRERPPADPRSHHHRTRDPRDNGSRSGDLPYDGRLEEAVRKGS
RDFPRSRDPHYDDFRSRERPPADPRSHHHRTRDPRDNGSRSGDLPYDGRLEEAVRKGS
RDFPRSRDPHYDDFRSRERPPADPRSHHHRTRDPRDNGSRSGDLPYDGRLEEAVRKGS

+-+ -

LSR1.Hs (SEQ ID NO:8)
LSR2.Hs (SEQ ID NO:10)
LSR3.Hs (SEQ ID NO:12)

EERRRPHKEEEEAYYPPAPPPYSETDSQASRERRLKKNLALSRESLVV
EERRRPHKEEEEAYYPPAPPPYSETDSQASRERRLKKNLALSRESLVV
EERRRPHKEEEEAYYPPAPPPYSETDSQASRERRLKKNLALSRESLVV

FIG. 3B

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

FFA
MAPAAGACAGAPDHPATVVFVCLFLIIIFCPDPASAIQVTVSDPYHVVILFQPVTLPC
MAPAAGACAGAPDHPATVVFVCLFLIIIFCPDPASAIQVTVSDPYHVVILFQPVTLPC
MAPAAGACAGAPDHPATVVFVCLFLIIIFCPDPASAIQVTVSDPYHVVILFQPVTLPC

QMSNTLTVPIVIWKYKSFCRDRIADAFSPASVDNQLNAQLAAGNPGYNPYVECQDSVRTV
QMSNTLTVPIVIWKYKSFCRDRIADAFSPASVDNQLNAQLAAGNPGYNPYVECQDSVRTV
QMSNTLTVPIVIWKYKSFCRDRIADAFSPASVDNQLNAQLAAGNPGYNPYVECQDSVRTV

RVVATKQGNAVTLDYYQGRRITITGNADLTFEQTAWGDSGVYYCSVSAQDLDGNNEAY
RVVATKQGNAVTLDYYQGRRITITGNADLTFEQTAWGDSGVYYCSVSAQDLDGNNEAY
RVVATKQGNAVTLDYYQGRRITITGNADLTFEQTAWGDSGVYYCSVSAQDLDGNNEAY

AEIIVLGRTEAPEIIEPGFRAFPLEDWLFWVVVCLASLLLFLGGICWCQCCPHTCCCYV
AEIIVL-----DWLFVVVVCLASLLLFLGGICWCQCCPHTCCCYV
AEIIVL-----

TM
RCPCCPDKCCCPEALYAAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPAMIPMGPPYGYP
RCPCCPDKCCCPEALYAAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPAMIPMGPPYGYP
-----VYAAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPAMIPMGPPYGYP

GDFDRHSSVGGHSSQVPLRDVGVSSEVRSGYRIQANQQDDSMRVLYYMEKELANFDP
GDFDRHSSVGGHSSQVPLRDVGVSSEVRSGYRIQANQQDDSMRVLYYMEKELANFDP
GDFDRHSSVGGHSSQVPLRDVGVSSEVRSGYRIQANQQDDSMRVLYYMEKELANFDP

SRPGPPNGRVERAMSEVTSIHEDDWRSRPSRAPALTPIRDEENRHS PQSPRTWEQEPLQ
SRPGPPNGRVERAMSEVTSIHEDDWRSRPSRAPALTPIRDEENRHS PQSPRTWEQEPLQ
SRPGPPNGRVERAMSEVTSIHEDDWRSRPSRAPALTPIRDEENRHS PQSPRTWEQEPLQ

EQPRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPRSRSRDDLYDP
EQPRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPRSRSRDDLYDP
EQPRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPRSRSRDDLYDP

DDPRDLPHSRDPHYDDIRSRDPRADPRSRQSRDPRDAGFRSRDPQYDGRLEEALKKK
DDPRDLPHSRDPHYDDIRSRDPRADPRSRQSRDPRDAGFRSRDPQYDGRLEEALKKK
DDPRDLPHSRDPHYDDIRSRDPRADPRSRQSRDPRDAGFRSRDPQYDGRLEEALKKK

FIG. 4A

LSR1.Rn (SEQ ID NO:2)
LSR2.Rn (SEQ ID NO:4)
LSR3.Rn (SEQ ID NO:6)

+ - + -

GSGERRRVYREEEEEEGQYPPAPPPYSETDSQASRERRLKKNLALSRESLVV
GSGERRRVYREEEEEEGQYPPAPPPYSETDSQASRERRLKKNLALSRESLVV
GSGERRRVYREEEEEEGQYPPAPPPYSETDSQASRERRLKKNLALSRESLVV

FIG. 4B

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR1 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR2 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

LSR1 .Mm (SEQ ID NO:16)
LSR2 .Mm (SEQ ID NO:17)
LSR3 .Mm (SEQ ID NO:18)

FFA

MAPAASACAGAPGSHPATTIFCLFLIIYCPDRASAIQVTVPDPYHVVILFQPVTLHCTY
MAPAASACAGAPGSHPATTIFCLFLIIYCPDRASAIQVTVPDPYHVVILFQPVTLHCTY
MAPAASACAGAPGSHPATTIFCLFLIIYCPDRASAIQVTVPDPYHVVILFQPVTLHCTY

QMSNTLTAPIVIWKYKSFCDRVADAFSPASVDNQLNAQLAAGNPGYNPYVECQDSVRTV
QMSNTLTAPIVIWKYKSFCDRVADAFSPASVDNQLNAQLAAGNPGYNPYVECQDSVRTV
QMSNTLTAPIVIWKYKSFCDRVADAFSPASVDNQLNAQLAAGNPGYNPYVECQDSVRTV

RVVATKQGNNAVTLDYYQGRRITITGNAGLTFEQTAWGSVYCSVVSAQDLDGNNEAY
RVVATKQGNNAVTLDYYQGRRITITGNAGLTFEQTAWGSVYCSVVSAQDLDGNNEAY
RVVATKQGNNAVTLDYYQGRRITITGNAGLTFEQTAWGSVYCSVVSAQDLDGNNEAY

AEELIVLGRTEAPEELPGFRAFPLEDWLFWVVVCLASLLFLLLGIWCQCCPHTCCCYV
AEELIVL-----DWLFVVVVCLASLLFLLLGIWCQCCPHTCCCYV
AEELIVL-----

TM
AEELIVL-----
RCPCCPDKCCCPEALYAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPAMIPMRPPYGY
RCPCCPDKCCCPEALYAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPAMIPMRPPYGY
-----VYAAGKAATSGVPSIYAPSIYTHLSPAKTPPPPAMIPMRPPYGY

GDFDRTSSVGGHSSQVPLLREVDGSVSSEVRSGYRIQANQDDSMRVLYYMEKELANFDP
GDFDRTSSVGGHSSQVPLLREVDGSVSSEVRSGYRIQANQDDSMRVLYYMEKELANFDP
GDFDRTSSVGGHSSQVPLLREVDGSVSSEVRSGYRIQANQDDSMRVLYYMEKELANFDP

SRPGPPNGRVERAMSEVTS LHEDDWRSRPSRAPALTPIRDEENRHSPRS PRTWEQEPLQ
SRPGPPNGRVERAMSEVTS LHEDDWRSRPSRAPALTPIRDEENRHSPRS PRTWEQEPLQ
SRPGPPNGRVERAMSEVTS LHEDDWRSRPSRAPALTPIRDEENRHSPRS PRTWEQEPLQ

EQPRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPSSR5R3RDDLYDP
EQPRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPSSR3R3RDDLYDP
EQPRGGWGSGRPRARSVDALDDINRPGSTESGRSSPPSSGRRGRAYAPPSSR5R3RDDLYDP

DDPRDLPHSRDPHYDDLRSRDPRADPRSQRSHDPRDAGFRSRDPQYDGRLLLEEALKKK
DDPRDLPHSRDPHYDDLRSRDPRADPRSQRSHDPRDAGFRSRDPQYDGRLLLEEALKKK
DDPRDLPHSRDPHYDDLRSRDPRADPRSQRSHDPRDAGFRSRDPQYDGRLLLEEALKKK

FIG. 5A

++-

| | |
|------------------------|---|
| LSR1.Mm (SEQ ID NO:16) | GAGERRRVYREEEEEEEGHYPPAPPPYSETDSQASRERRMKKNLALSRESLVV |
| LSR2.Mm (SEQ ID NO:17) | GAGERRRVYREEEEEEEGHYPPAPPPYSETDSQASRERRMKKNLALSRESLVV |
| LSR3.Mm (SEQ ID NO:18) | GAGERRRVYREEEEEEEGHYPPAPPPYSETDSQASRERRMKKNLALSRESLVV |

FIG. 5B

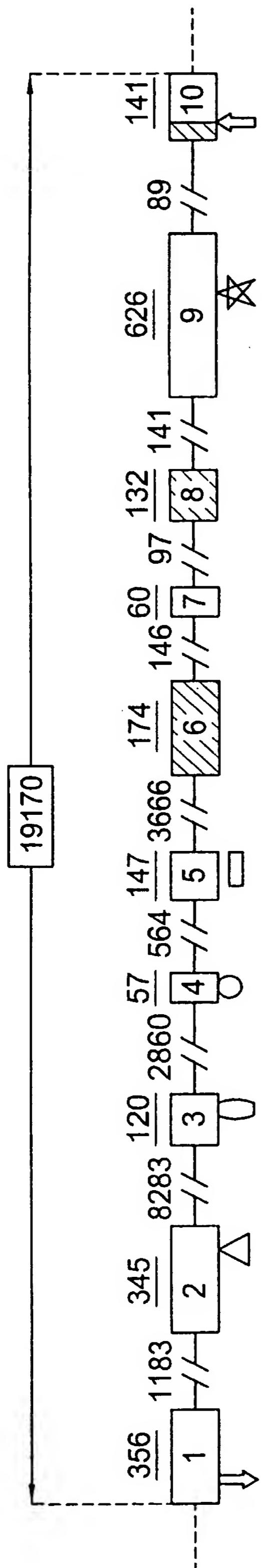


FIG. 6A

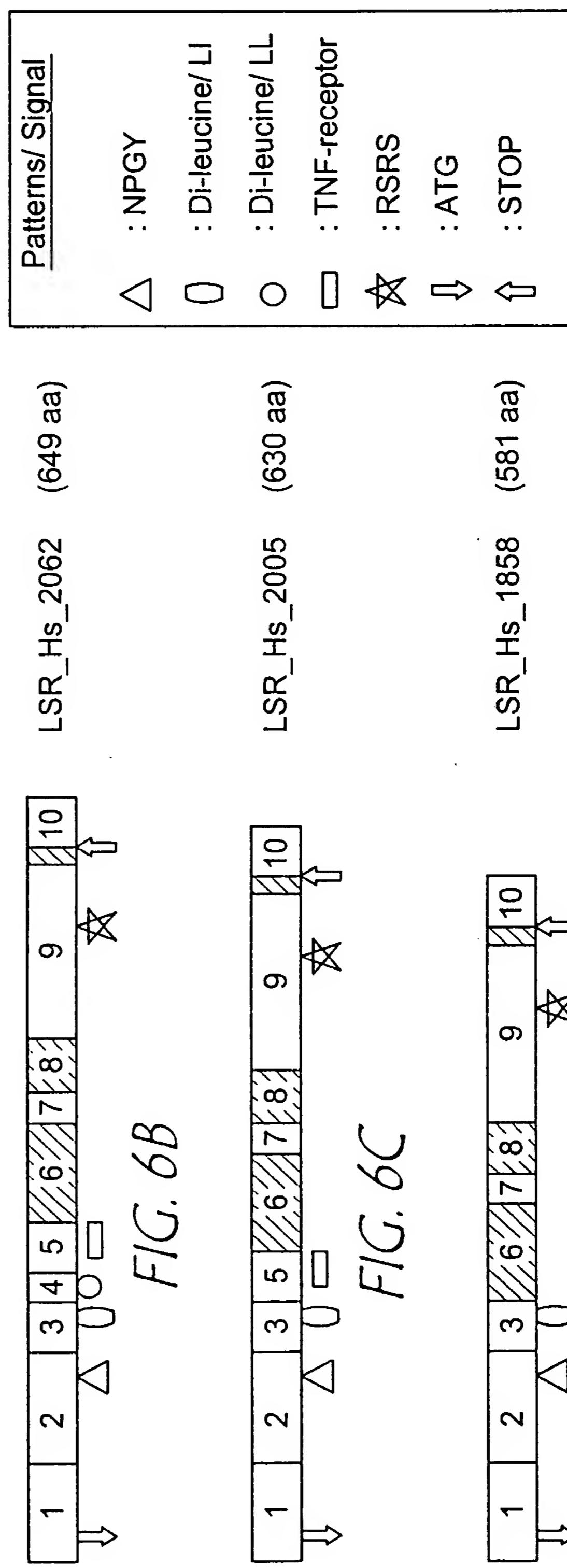


FIG. 6B

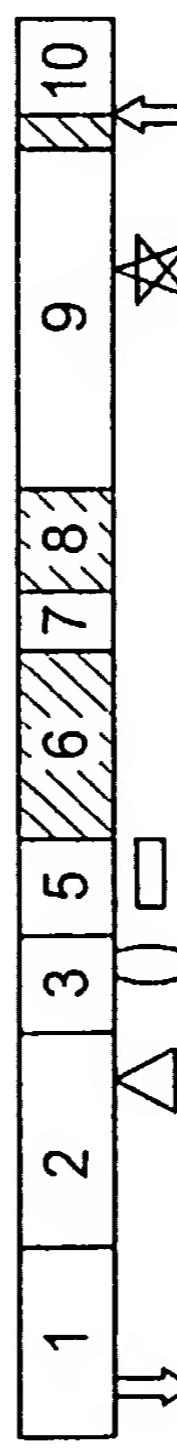


FIG. 6C

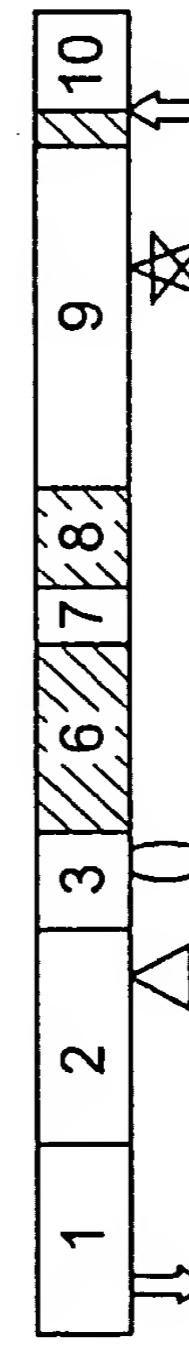


FIG. 6D

| | |
|-------------------------------|---|
| <u>1sr1.Hs</u> (SEQ ID NO:7) | TGGAGTGTGGCTGGAGGACCGCGGGGGTCAAGCACCTTCTCCCCATATCTGAAAGC |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | -----ACCGCTCACCAAGGTCAAGTGTCCCCGGAAAGCCGAAGGC |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | ----- |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | ATGCCCTTGTCACGTCGTTACGCTCATTAAAACCTCCAGAATGCAACAGGACGGA |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | ATGAGCTTCGCCAAGTTCTTTATGGGTTAGAACTCCTCCAGAGCGGGGGAAAAAGGA |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | ----- |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | CTTGGAGTAGGGACAAGGAACGGAAGTGGGAAGGGGAGGAGCGTGCACCCCTCCTGGCCT |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | CTTGGAAATAGGGGC-----GGGACGGAGCACGCACCCCTCCTCCGCCT |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | ----- |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | TGGTGC CGCGCCGCCCCCTA-----AGGTACTTTGGAAGGGACGCGCGGGC-CAGACG |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | TGGTCTCGCCGCGCCCCCTACTCTCGGGATACTTGGGAGGGGACGCGCGGGCACCGTCG |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | -----GCACCGTCG |
| | ***** |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | CGCCCAGACGGCGCGATGGCGCTGTTGGCCGGGGCTCTCCAGAGGGCTGGCTCCCA |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | CTGCTAGACGGCGCGATGGCGCCGGCGCGGTGTGCTGGGGCGCCTGACTCCCA |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | CTGCTAGACGGCGCGATGGCGCCGGCGGCCAGCGCGTGTGCTGGGGCGCCTGGCTCCCA |
| | ***** |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | CCCGGCCGCCGCAGGCCGGACGCCGGTCTTGTGGCTCTGCTTAGCACCTGGTG |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | CCCAGCTACCGTGG-----TCTTCGTGTCTCTTCATCATTTCCTG |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | CCCGGCCACCAACGA-----TCTTCGTGTCTTTCTCATCATTACTG |
| | ***** |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | CACAGCTCCTGCCAGGCCATCCAGGTGACCGTGCAACCCCTACCACGTGGTATCCT |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | CCCAGACCCCTGCCAGTGCATCCAGGTGACTGTGCTGACCCCTACCACGTAGTGATCCT |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | CCCAGACCGTGCCAGTGCATCCAGGTGACCGTGCCCTGACCCCTACCACGTAGTGATCCT |
| | ***** |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | CTTCCAGCCTGTGAACCTGCCCTGTACCTACCAGATGACCTCGACCCCCACGCAACCCAT |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | GTTCCAGCCAGTGACCCCTGCCCTGCACCTATCAGATGAGCAACACTCTCACAGTCCCCAT |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | GTTCCAGCCAGTGACACTACACTGCACCTACCAGATGAGCAATACCCCTCACAGCCCTAT |
| | ***** |
| | |
| <u>1sr1.Hs</u> (SEQ ID NO:7) | CGTCATCTGGAAGTACAAGTCTTCTGCCGGACCGCATGCCGATGCCTCTCCCCGGC |
| <u>1sr1.Rn</u> (SEQ ID NO:1) | CGTGATCTGGAAGTACAAGTCATTCTGCCGGACCGTATTGCCGATGCCTCTCCTGC |
| <u>1sr1.Mm</u> (SEQ ID NO:13) | CGTGATCTGGAAGTATAAGTCGTTCTGTCGGGACCGTGTGCCGACGCCCTCTCCCTGC |
| | ***** |

FIG. 7A

| | |
|-------------------------------|---|
| <u>lsr1.Hs (SEQ ID NO:7)</u> | CAGCGTCGACAACCAGCTCAATGCCAGCTGGCAGCCGGAACCCAGGCTACAACCCCTA |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | CAGTGTGGACAACCAGCTAAATGCCAGCTGGCAGCTGGCAACCCGGCTACAACCCCTA |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | CAGCGTGGACAACCAGCTCAACGCCAGCTGGCGGCTGGCAACCCGGCTACAACCCCTA |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | CGTTGAGTGCCAGGACAGCGTGGCACCCTCAGGGTCGTGGCCACCAAGCAGGGCAACGC |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | TGTGGAGTGCCAGGACAGTGTACGCAGTGTCAAGGGTGGTGGCCACCAAACAGGGCAATGC |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | TGTGGAGTGCCAGGACAGCGTACGCAGTGTCAAGGGTGGTGGCCACCAAACAGGGCAATGC |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | TGTGACCCCTGGGAGATTACTACCAGGGCCGGAGGATTACCATCACCGAAATGCTGACCT |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | GGTGACCCCTGGGAGACTACTACCAAGGCAGGAGGATCACCATAACAGGAAATGCTGACCT |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | TGTGACCCCTGGGAGACTACTACCAGGGCAGGAGAATCACCATCACAGGAAATGCTGGCCT |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | GACCTTGACCAGACGGCGTGGGGGACAGTGGTGTATTACTGCTCCGTGGCTCAGC |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | GACCTTCGAGCAGACAGCCTGGGAGACAGTGGAGTGTATTACTGCTCTGTGGCTCGGC |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | GACCTTCGAGCAGACGGCCTGGGAGACAGTGGAGTGTATTACTGCTCCGTGGCTCAGC |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | CCAGGACCTCCAGGGAAACAATGAGGCCTACGCAGAGCTCATCGTCTTGGGAGGACCTC |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | CCAAGATCTGGATGGAAACAACGAGGCAGCAGAGCTCATCGTCTTGGCAGGACCTC |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | CCAAGATCTGGATGGAAACAACGAGGCAGCAGAGCTCATCGTCTTGGCAGGACCTC |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | AGGGGTGGCTGAGCTCTTACCTGGTTTCAGGGGGGCCATAGAAGACTGGCTTTCTG |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | AGAGGGCCCTGAGCTCTACCTGGTTTCAGGGGGGCCCTGGAAAGATTGGCTTTCTG |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | AGAAGGGCCCTGAGCTCTACCTGGTTTCAGGGGGGCCCTGGAAAGATTGGCTTTCTG |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | GGTTGTGGTATGCCCTGGCTGCCCTCCTCATCTTCTCCTGGCATCTGCTGGTGCCA |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | GGTCGTGGTCTGCCCTGGCGAGCCTCCTCTTCTCCTGGCATCTGCTGGTGCCA |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | GGTCGTGGTCTGCCCTGGCAAGCCTCCTCTTCTCCTGGCATCTGCTGGTGCCA |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | GTGCTGCCCGCACACTGCTGCTACGTCAAGGTGCCCTGCTGCCAGACAAGTGCTG |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | GTGCTGTCTCACACCTGCTGCTATGTCCGATGTCCCTGCTGCCAGACAAGTGCTG |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | GTGCTGTCCCCACACCTGCTGCTATGTCAAGATGTCCCTGCTGCCAGACAAGTGCTG |
| ***** | |
| <u>lsr1.Hs (SEQ ID NO:7)</u> | CTGCCCGAGGCCCTGTATGCCGCCGCAAAGCAGCCACCTCAGGTGTTCCAGCATTAA |
| <u>lsr1.Rn (SEQ ID NO:1)</u> | TTGCCCTGAGGCTTTATGCTGGCAAAGCAGCCACCTCAGGTGTCCAGCATTCTA |
| <u>lsr1.Mm (SEQ ID NO:13)</u> | TTGCCCTGAGGCCCTTATGCTGGCAAAGCAGCCACCTCAGGTGTGCCAAGCATTCTA |
| ***** | |

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

TGCCCCCAGCACCTATGCCAACCTGTCTCCGCCAAGACCCCACC---CCCACCAAGCTAT
TGCCCCCAGCATCTATAACCCACCTCTCACCTGCCAAGACCCCACCACCTCCGCCTGCCAT
TGCCCCCAGCATCTATAACCCACCTCTCACCTGCCAAGACTCCGCCACCTCCGCCTGCCAT

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

GATTCCCATGGGCCCTGCCTACAACGGGTACCCCTGGAGGATACCCCTGGAGACGTTGACAG
GATTCCCATGGGCCCTCCCTAT-----GGGTACCCCTGGAGACTTGACAG
GATTCCCATGCGTCCCTCCCTAT-----GGGTACCCCTGGAGACTTGACAG

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

GAGTAGCTCAGCTGGTGGCCAAGGCTCCTATGTACCCCTGCTCGGGACACGGACAGCAG
ACATAGCTCAGTTGGTGGCCACAGCTCCCAAGTACCCCTGCTGCGTGACGTGGATGGCAG
GACCAGCTCAGTTGGTGGCCACAGCTCCCAAGGTGCCCTGCTGCGTGAAAGTGGATGGAG

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

TGTGGCCTCTGAAGTCCGAGTGGCTACAGGATTAGGCCAGCCAGGACGACTCCAT
TGTATCTTCAGAAAGTACGAAGTGGCTACAGGATCCAGGCTAACCAAGATGACTCCAT
CGTATCTTCAGAAAGTACGAAGTGGCTACAGGATCCAGGCTAACCAAGATGACTCCAT

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

CGGGGTCTGTACTACATGGAGAAGGAGCTGGCCAACCTCGACCCCTCTCGACCTGGCCC
GAGGGTCCTATACTATATGGAGAAAGAGCTAGCCAACCTTGACCCCTCCGACCTGGCCC
GAGGGTCCTATACTATATGGAGAAGGAGCTAGCCAACCTCGATCCTCCGGCTGGCCC

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

CCCCAGTGGCGTGTGGAGCGGGCATGAGTGAAGTCACCTCCCTCACGAGGACGACTG
TCCAATGGCAGAGTGGAACGGCCATGAGTGAAGTAACCTCCCTCATGAAGATGACTG
TCCAATGGCGAGTGGAACGGCCATGAGTGAAGTAACCTCCCTCATGAAGATGACTG

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

GCGATCTCGGCCTCCGGGCCCTGCCCTACCCGATCCGGATGAGGAGTGGGTGG
GCGATCGAGGCCTTCCAGGGCTCCATGCCCTACCCCCATCAGGGATGAGGAGTGGAAATCG
GCGATCTCGGCCTCCAGGGCTCCATGCCCTACACCCATCAGGGATGAGGAGTGGAAATCG

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

CCACTCCCCCGGAGTCCCAGGGATGGGACCAGGAGCCGCCAGGGAGCAGGCAGGCG
CCACTCCCCACAGAGTCCCAGAACATGGGAGCAGGAACCCCTCAAGAACACCAAGGG
CCACTCCCCCTCGGAGTCCCAGAACATGGGAGCAGGAACCCCTCAAGAACACGCCAAGGG

1sr1.Hs (SEQ ID NO:7)

1sr1.Rn (SEQ ID NO:1)

1sr1.Mm (SEQ ID NO:13)

GGGCTGGCGGGCCAGGCAGGCCCCGGGCCCTCCGTGGACGCCCTGGACGACCTCACCC
TGGTTGGGGGTCTGGACGCCCTCGGGCCCGCTCTGTGGATGCTCTAGATGATATCAACCG
TGGTTGGGGGTCTGGCGGCCCTCGGGCCCGCTCTGTGGATGCTCTAGATGACATCAACCG

FIG. 7C

lsrl.Hs (SEQ ID NO:7)
lsrl.Rn (SEQ ID NO:1)
lsrl.Mm (SEQ ID NO:13)

lsr1.Hs (SEQ ID NO:7)
lsr1.Rn (SEQ ID NO:1)
lsr1.Mm (SEQ ID NO:13)

lsr1.Hs (SEQ ID NO:7)
lsr1.Rn (SEQ ID NO:1)
lsr1.Mm (SEQ ID NO:13)

lsrl.Rs (SEQ ID NO:7)
lsrl.Rn (SEQ ID NO:1)
lsrl.Mm (SEQ ID NO:13)

lsri.Rn (SEQ ID NO:1)
lsri.Mm (SEQ ID NO:13)

lsrl.Hs (SEQ ID NO:7)
lsrl.Rn (SEQ ID NO:1)
lsrl.Mm (SEQ ID NO:13)

lsr1.Hs (SEQ ID NO:7)
lsr1.Rn (SEQ ID NO:1)
lsr1.Mm (SEQ ID NO:13)

lsrl.Hs (SEQ ID NO:7)
lsrl.Rn (SEQ ID NO:1)
lsrl.Mm (SEQ ID NO:13)

lsrl.Hs (SEQ ID NO:7)
lsrl.Rn (SEQ ID NO:1)
lsrl.Mm (SEQ ID NO:13)

TTGTACTTTTTTAATTGGAATCAATATTGATGAACTTCAAGCCTAATAAAATGTCT
TTATACTTTTTAATTGGAATATTGATGA--AACTCTTCAACCAAGCCTAATAAAA-----

FIG. 7D

lsr1.Hs (SEQ ID NO:7) -----
lsr1.Rn (SEQ ID NO:1) AATCACAAAAAAAAAA
lsr1.Mm (SEQ ID NO:13) -----

FIG. 7E

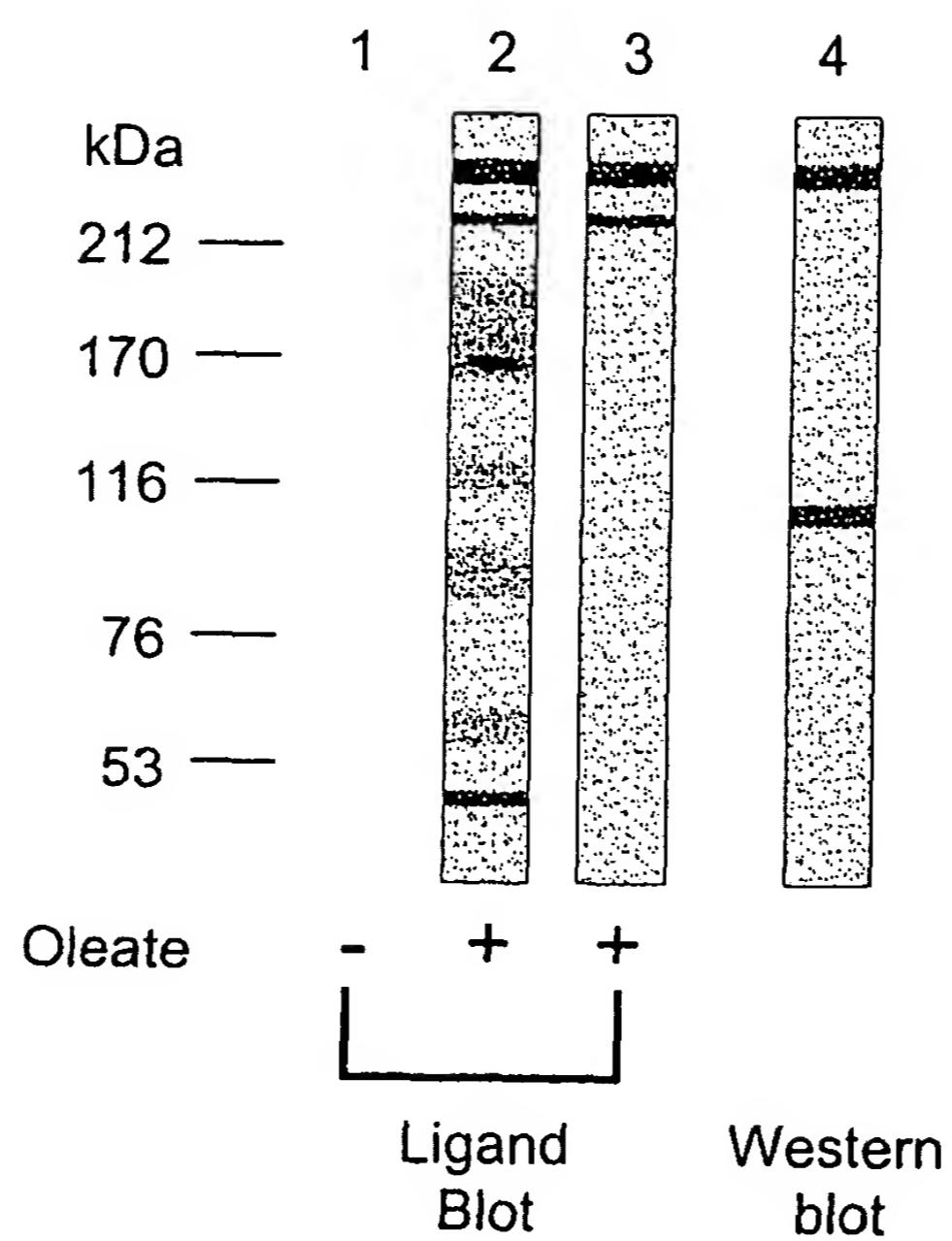


FIG. 8

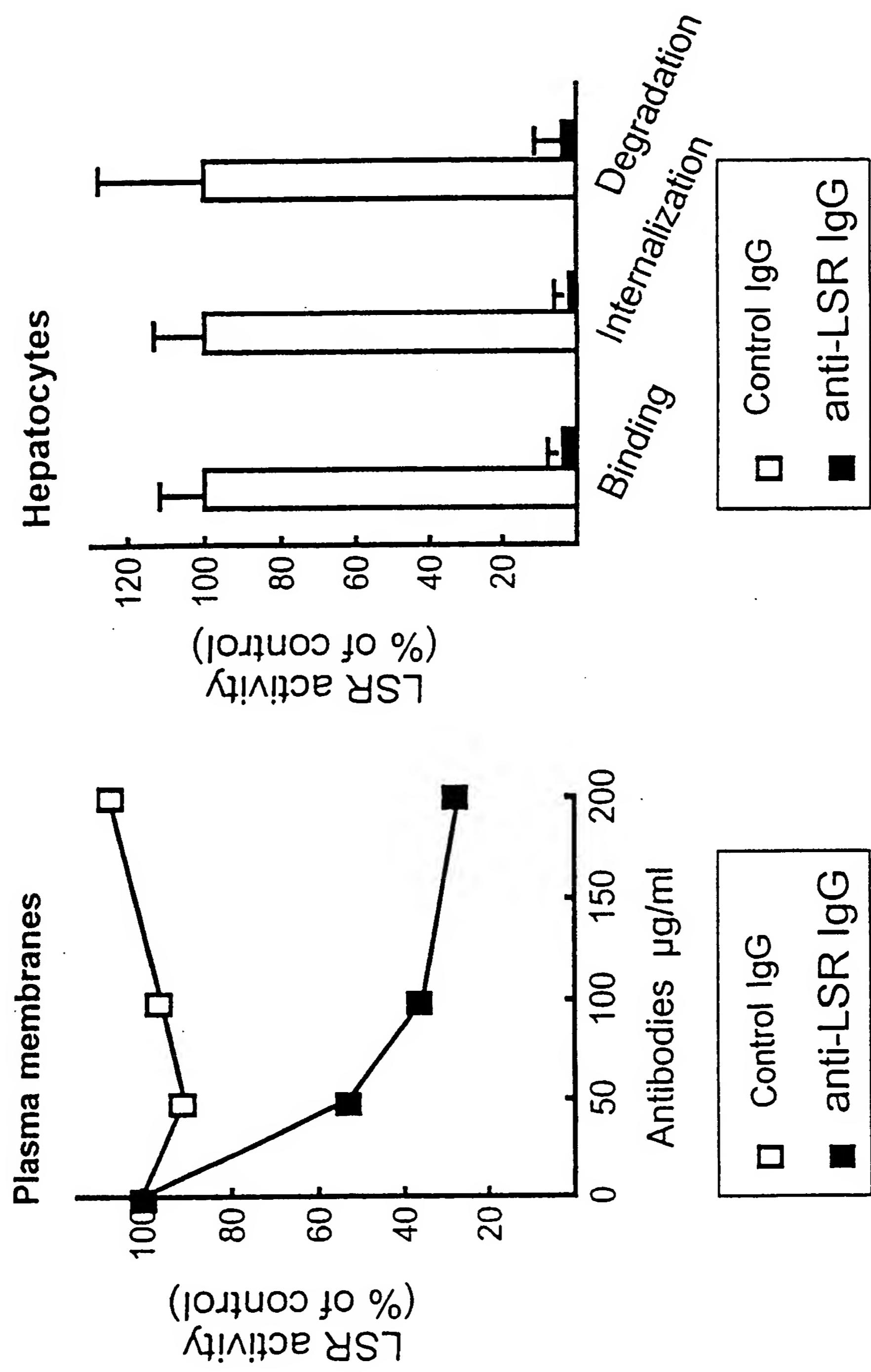


FIG. 9B

FIG. 9A

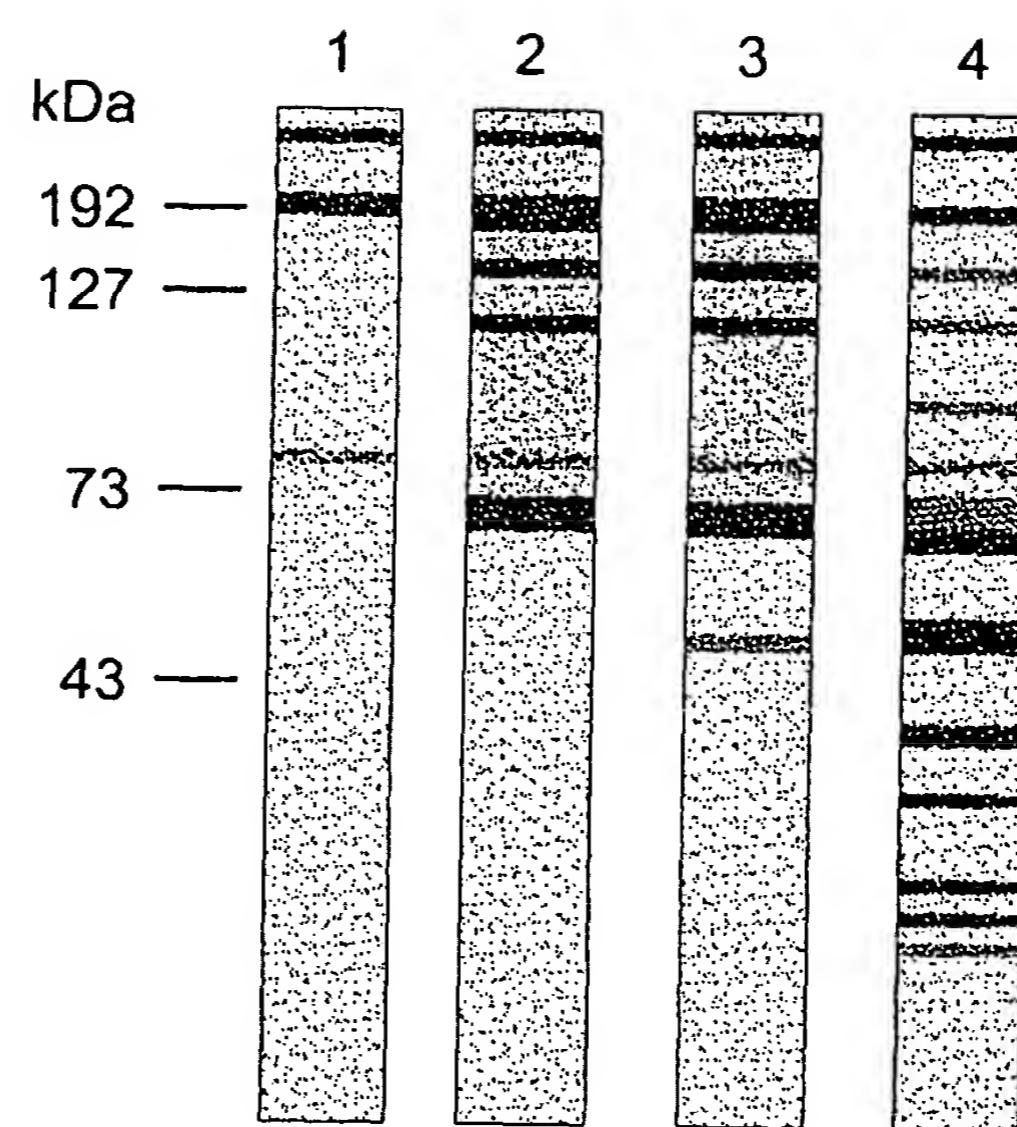
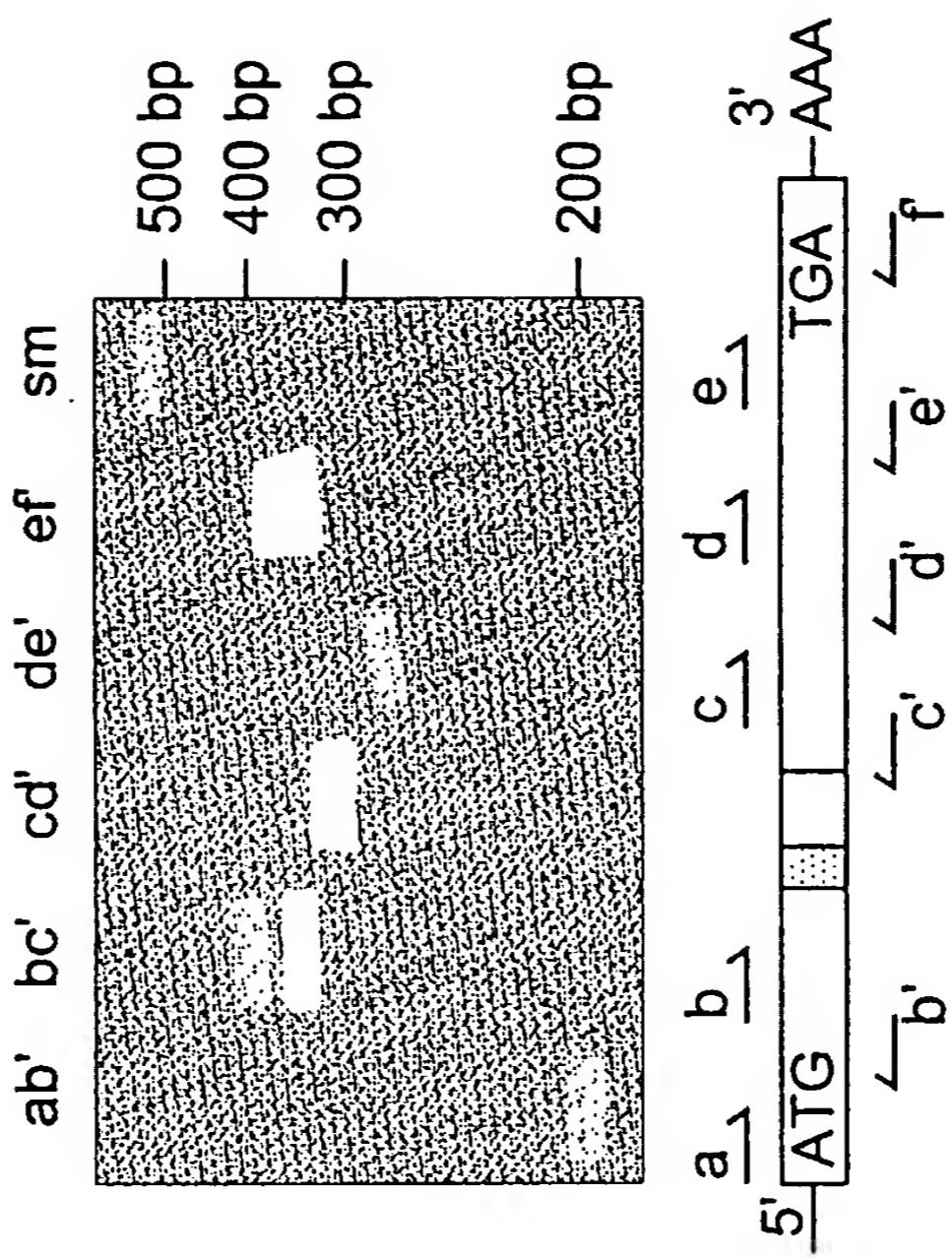
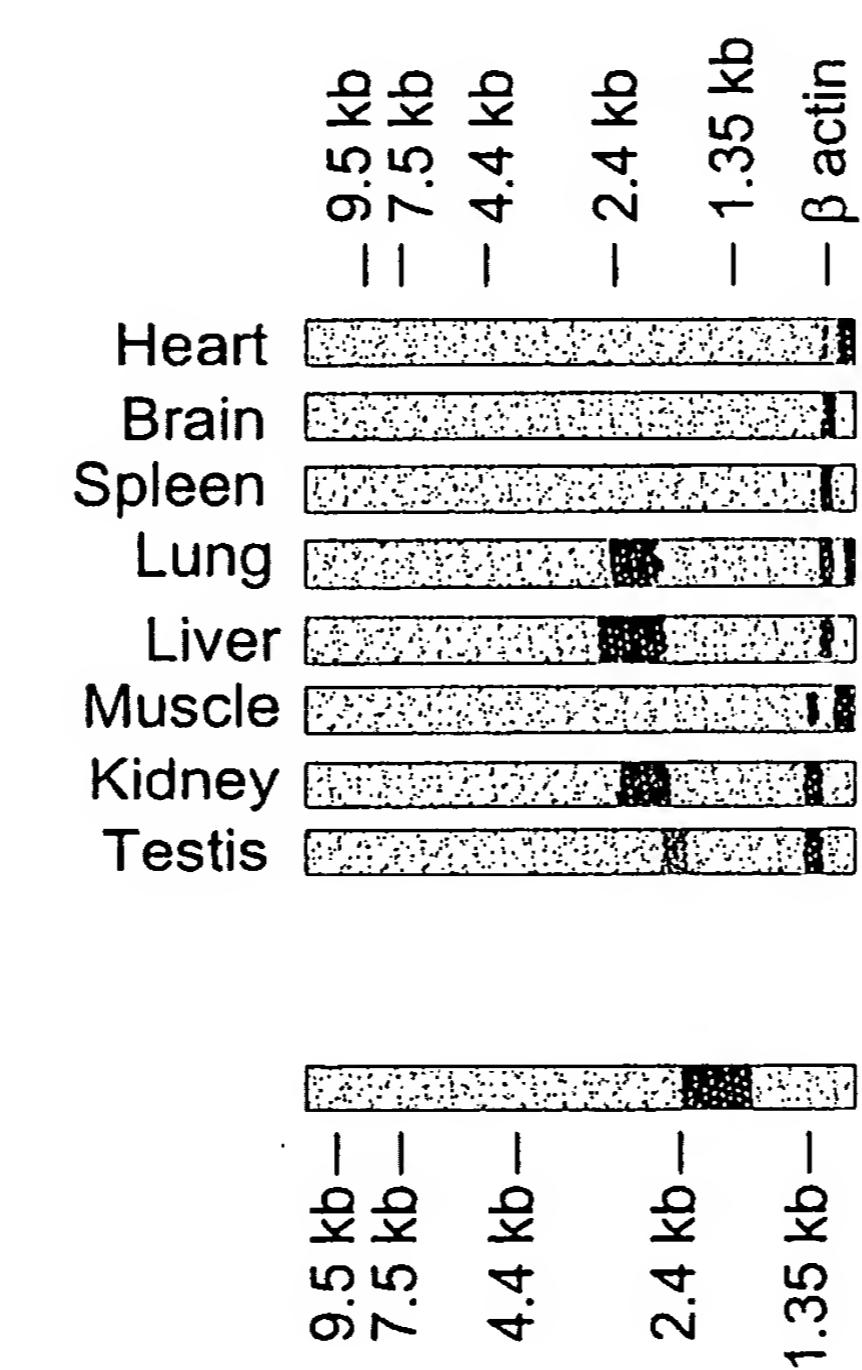


FIG. 10



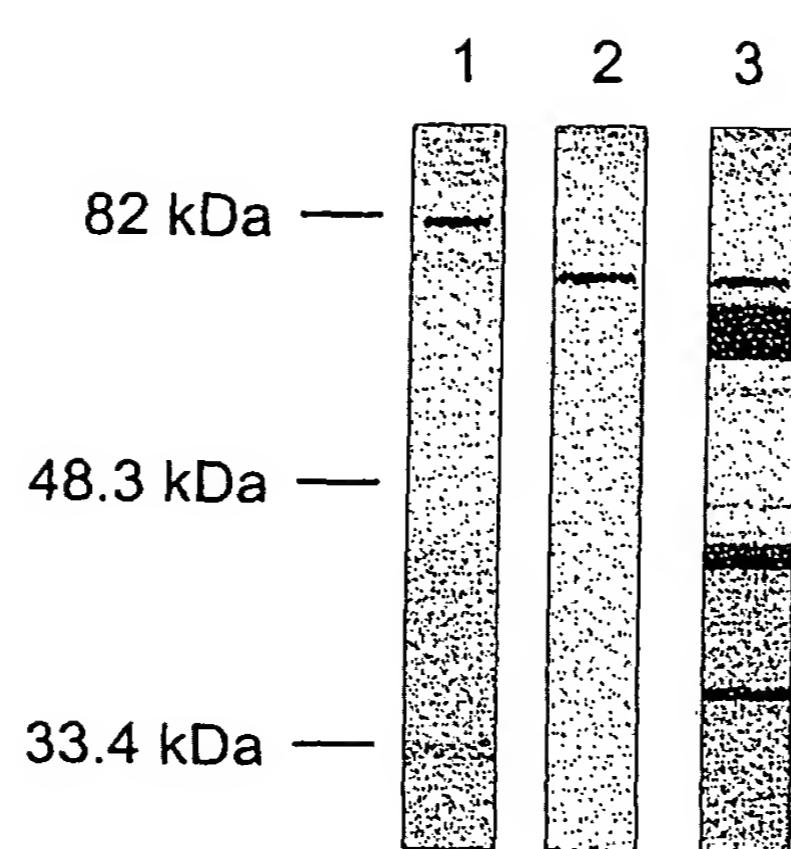


FIG. 12

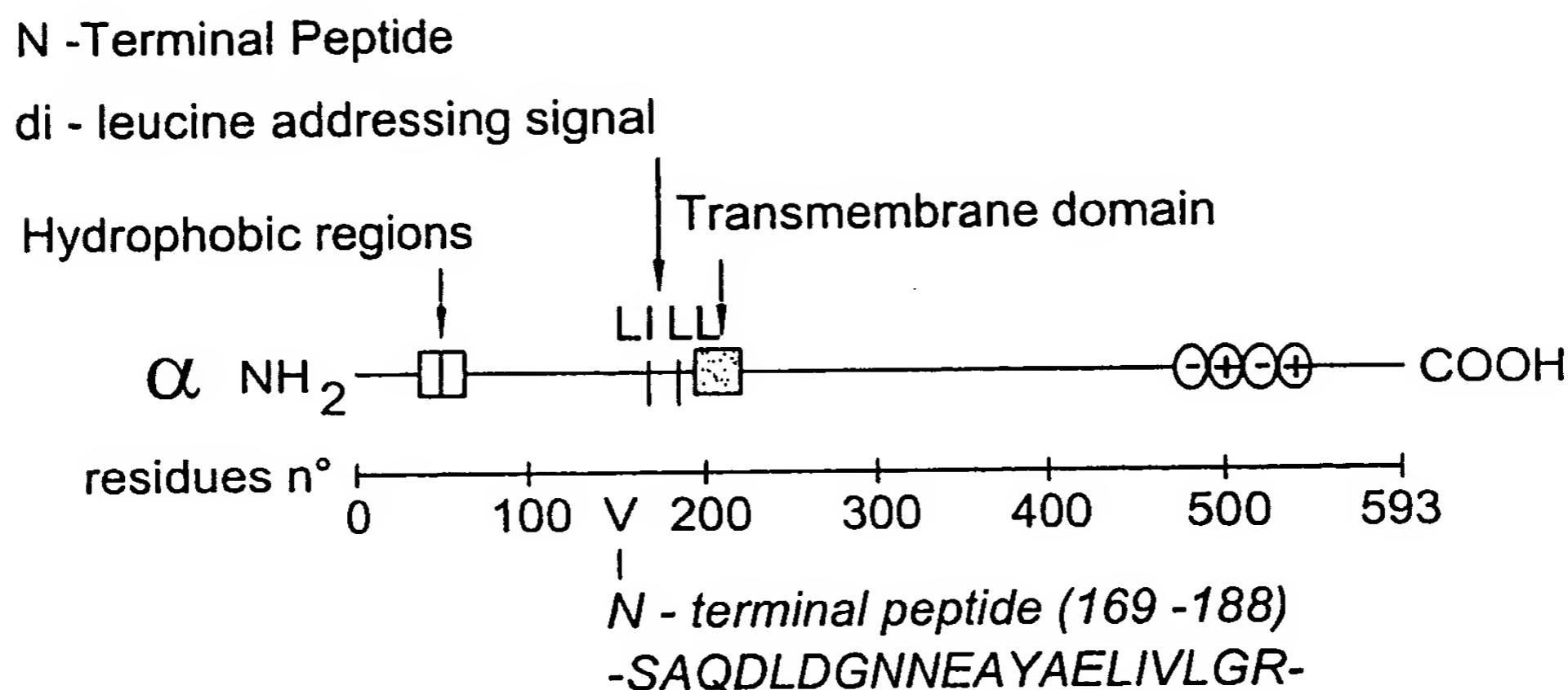


FIG. 13A

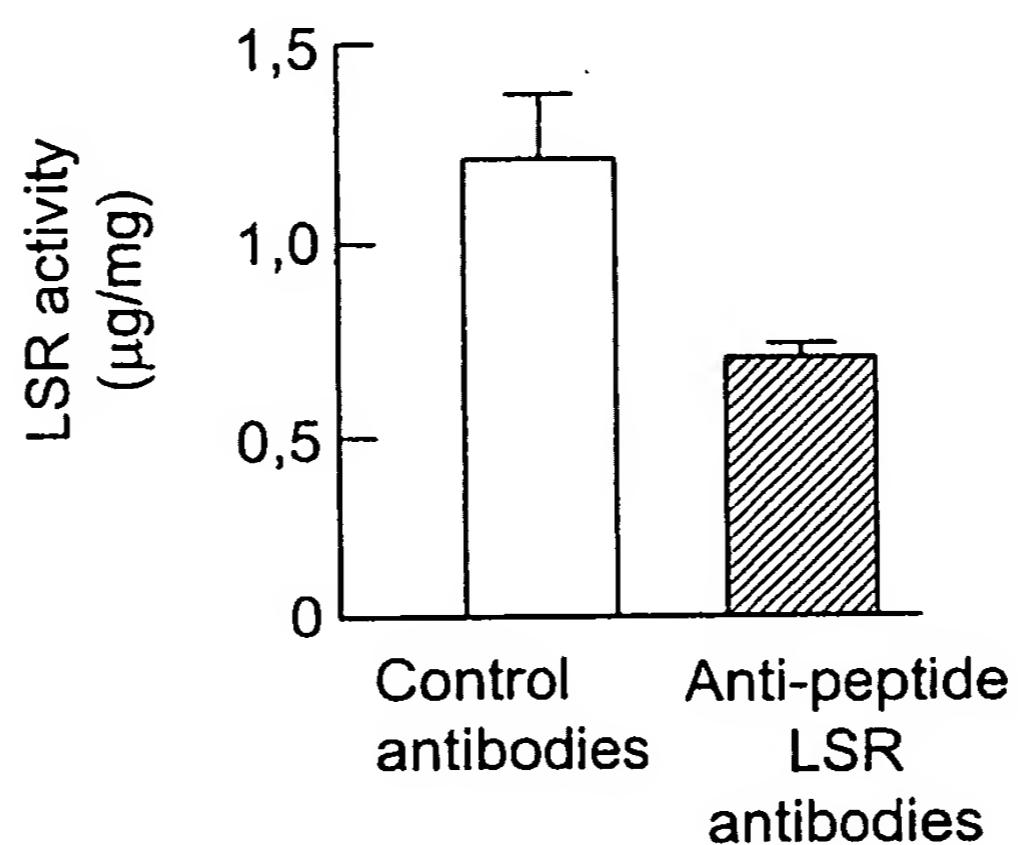


FIG. 13B

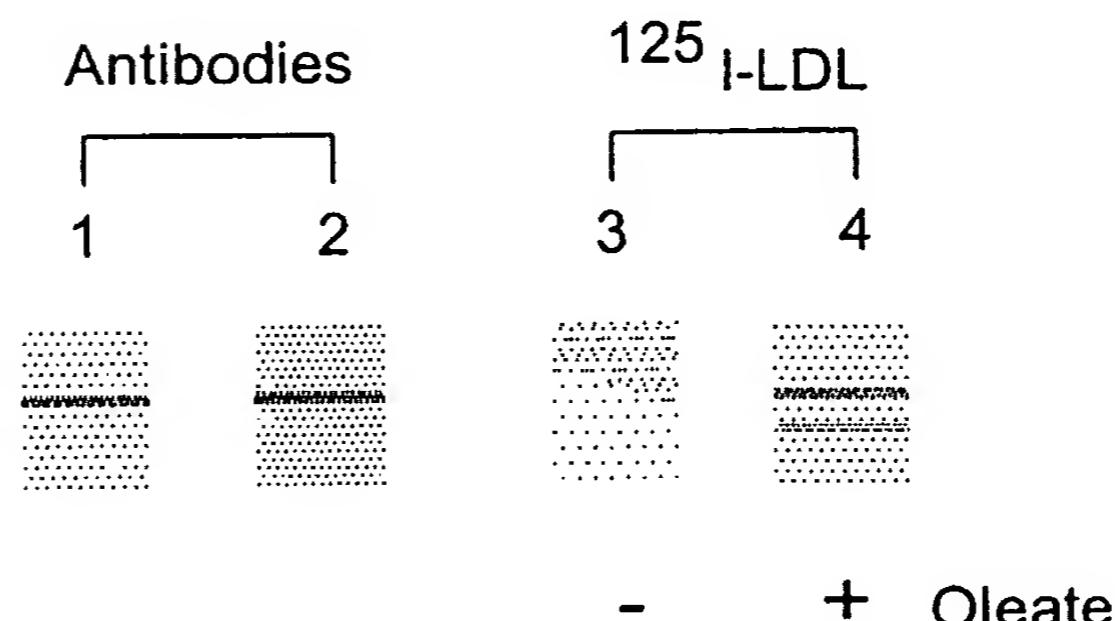


FIG. 13C

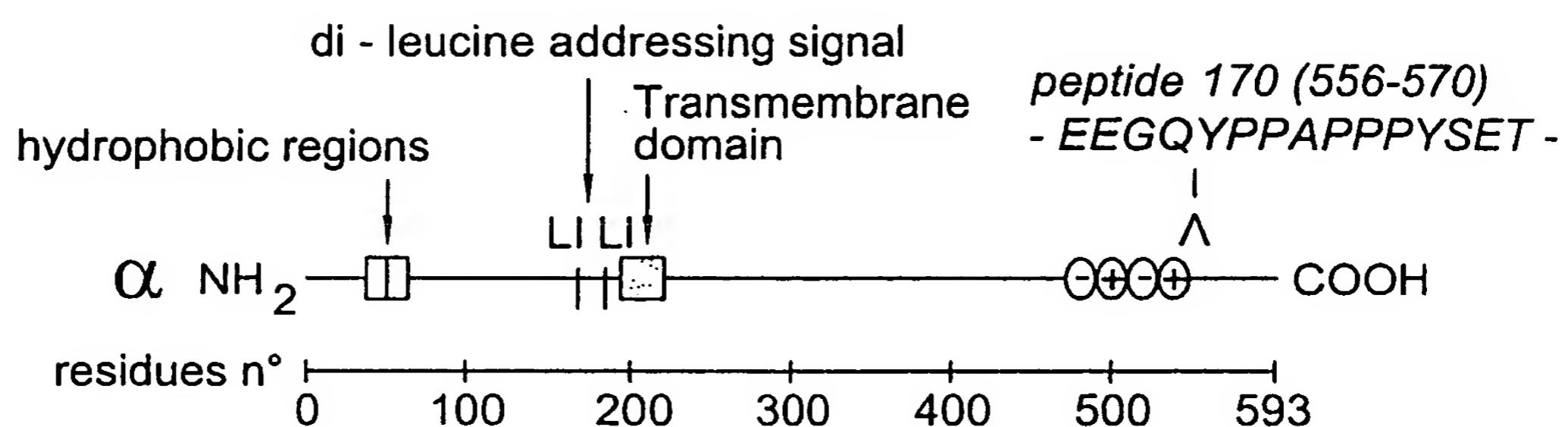


FIG. 14A Peptide 170

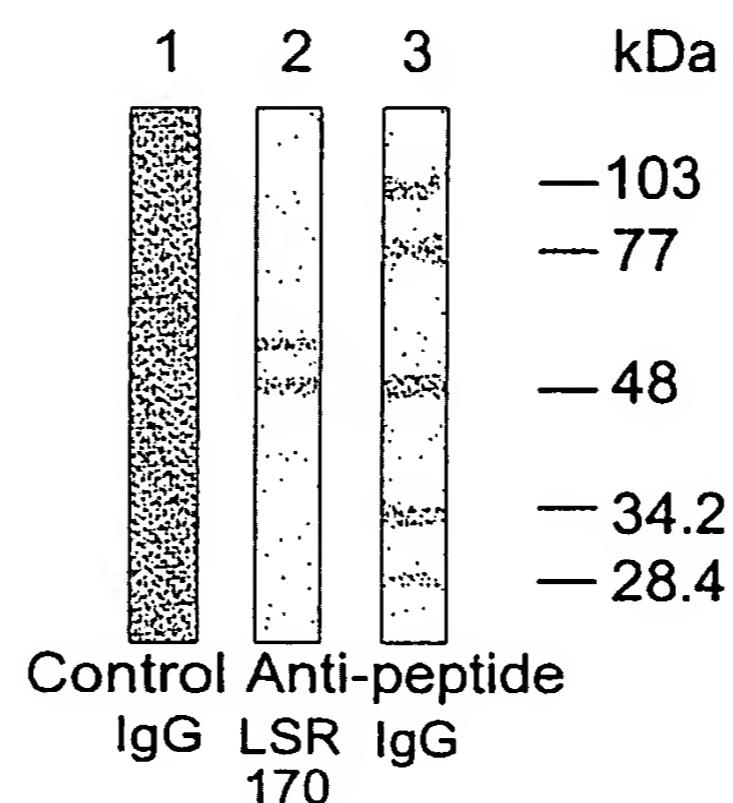


FIG. 14B Western

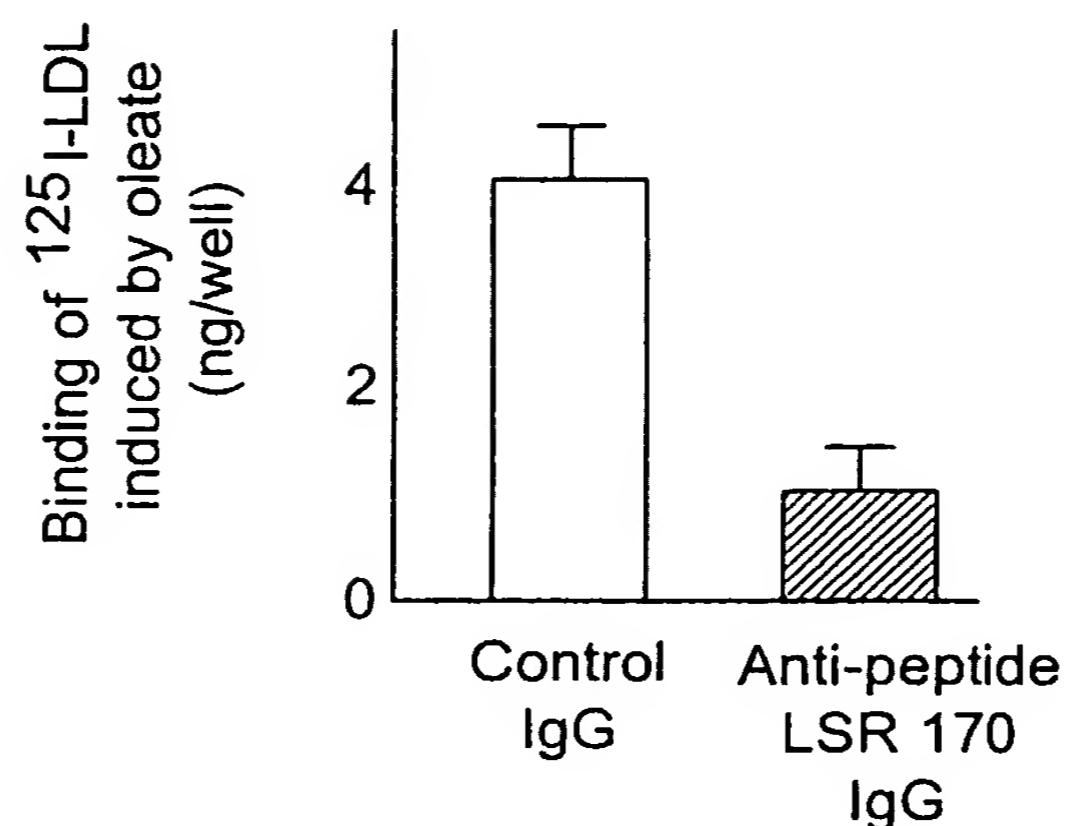
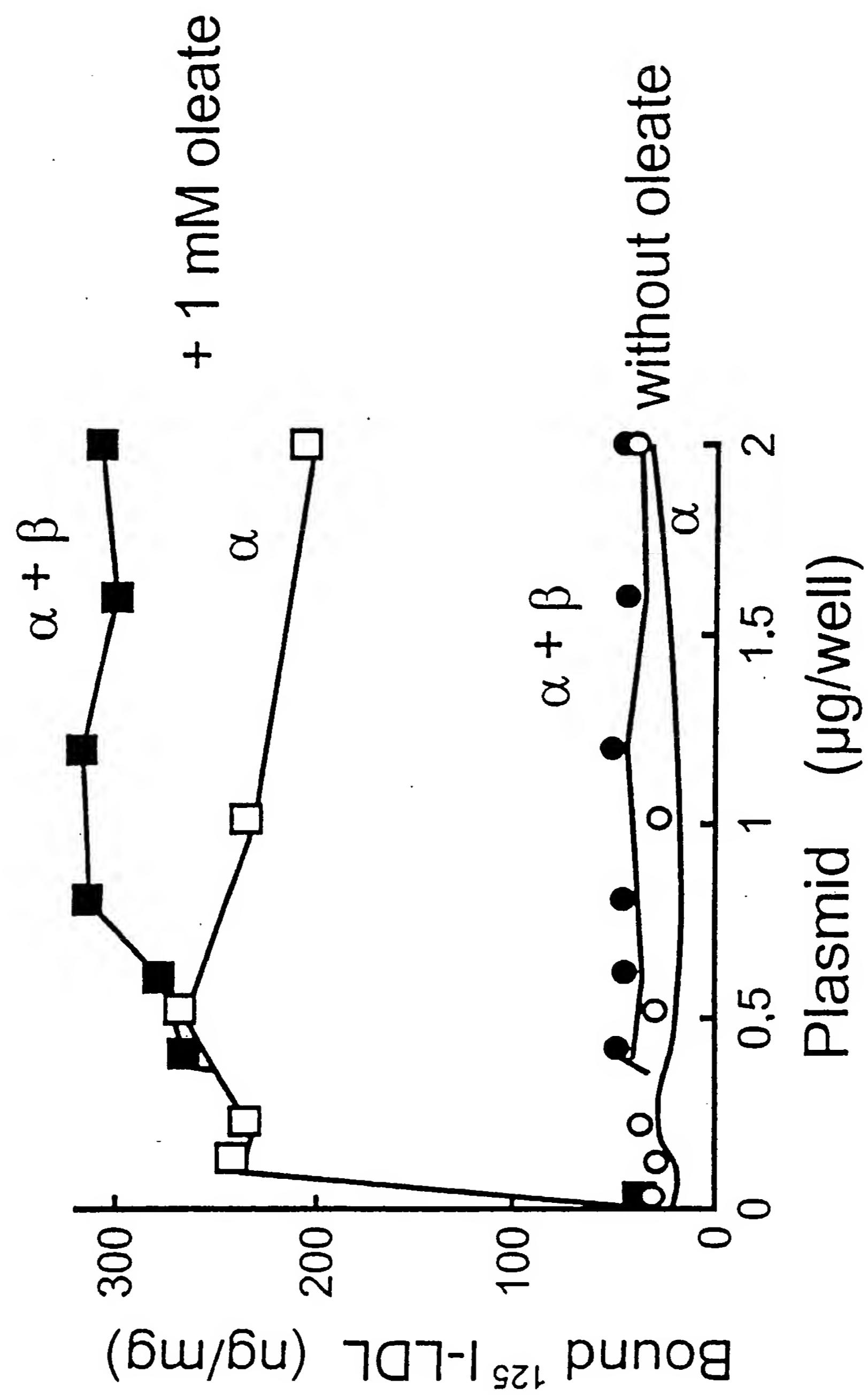


FIG. 14C Immunoinhibition



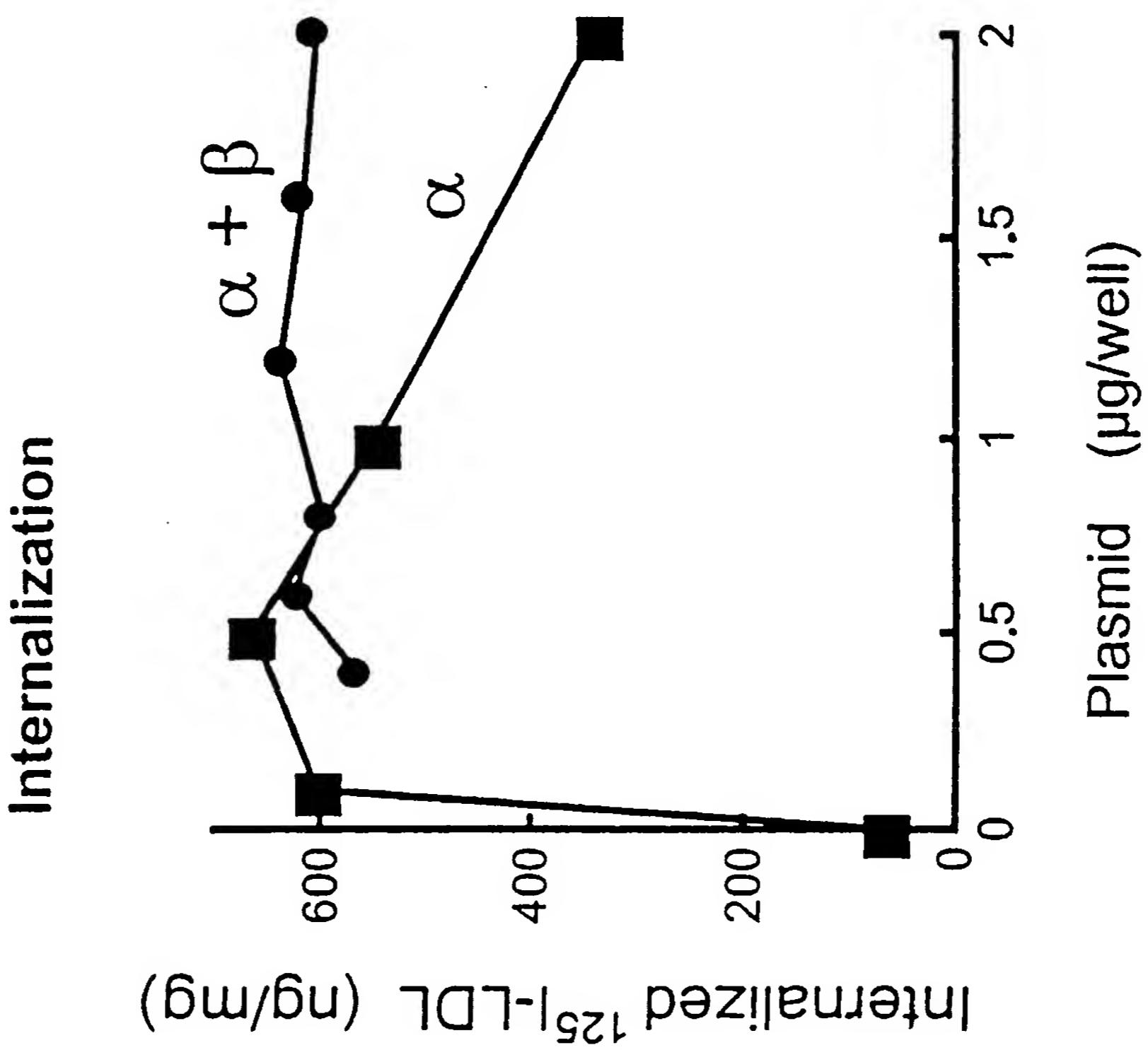
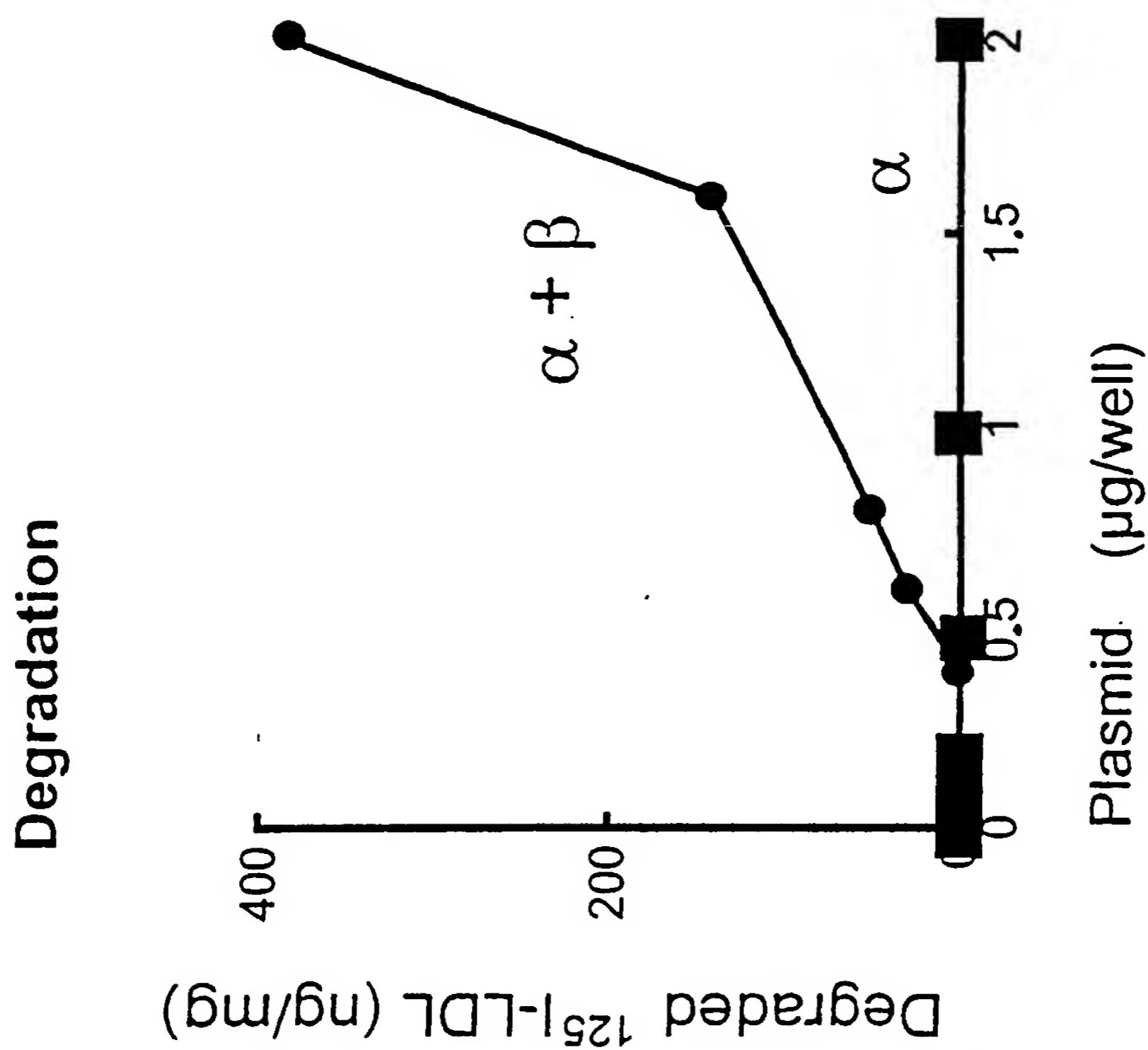
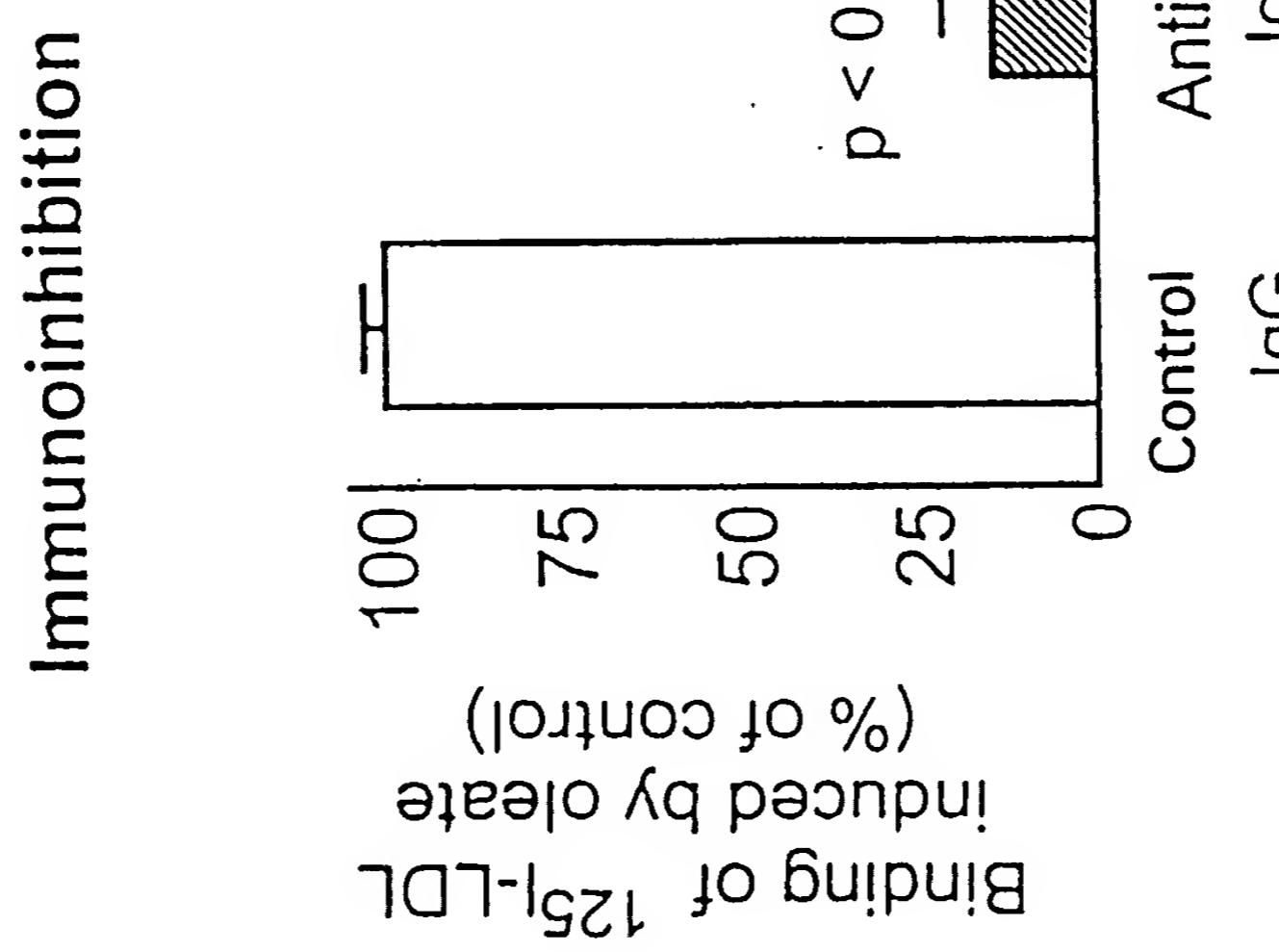


FIG. 16B

FIG. 16A



Ligand specificity

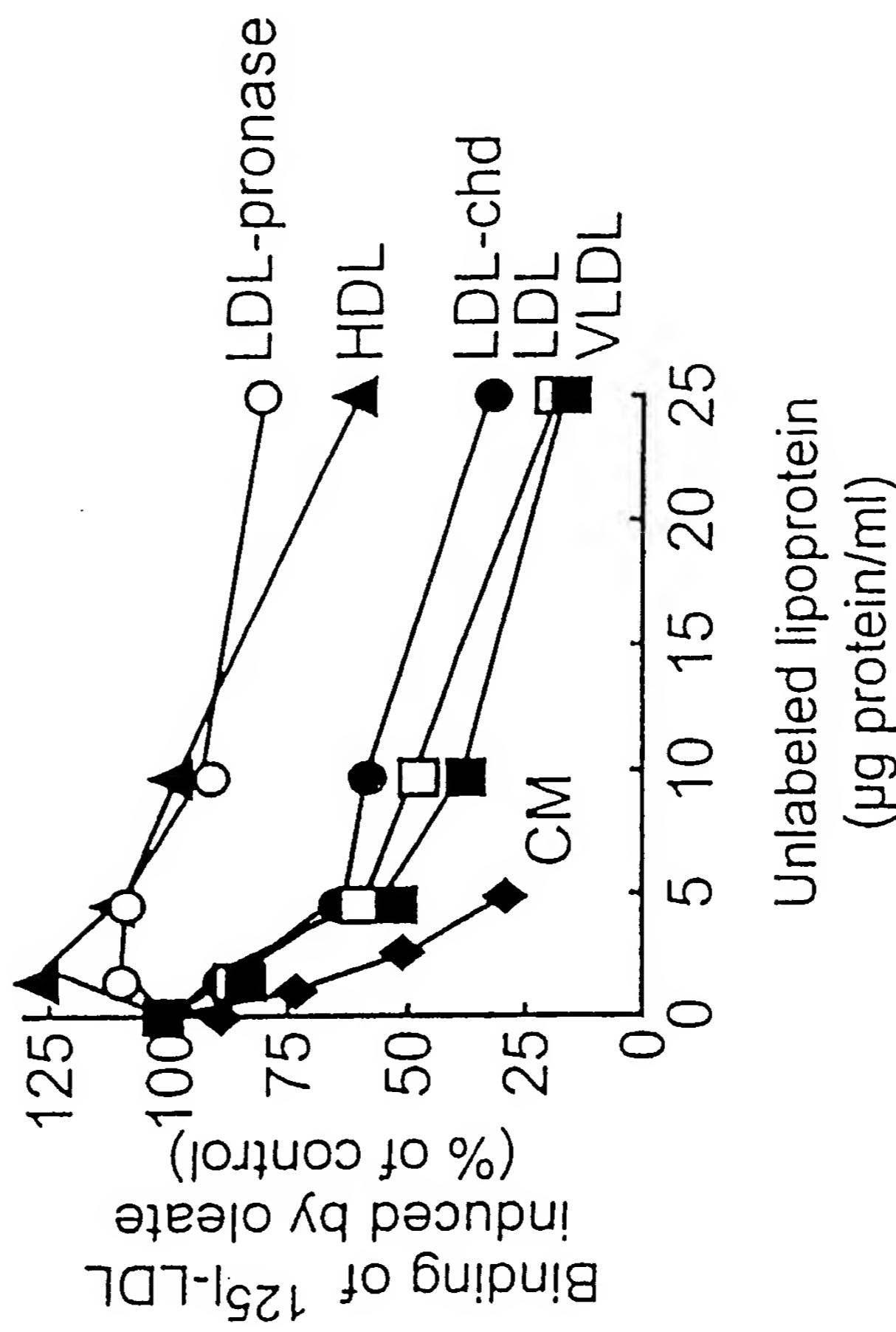
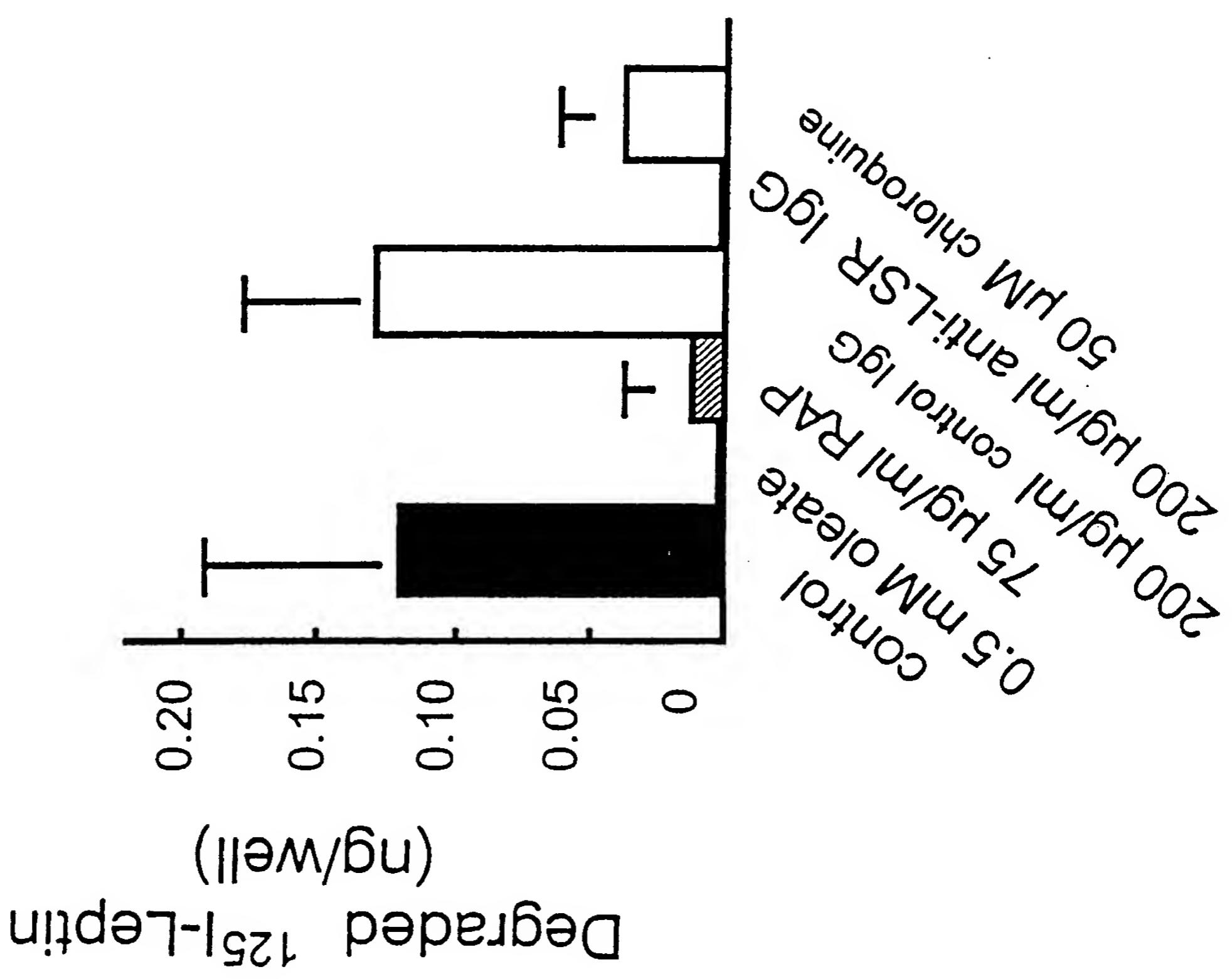


FIG. 17A

FIG. 17B

FIG. 18



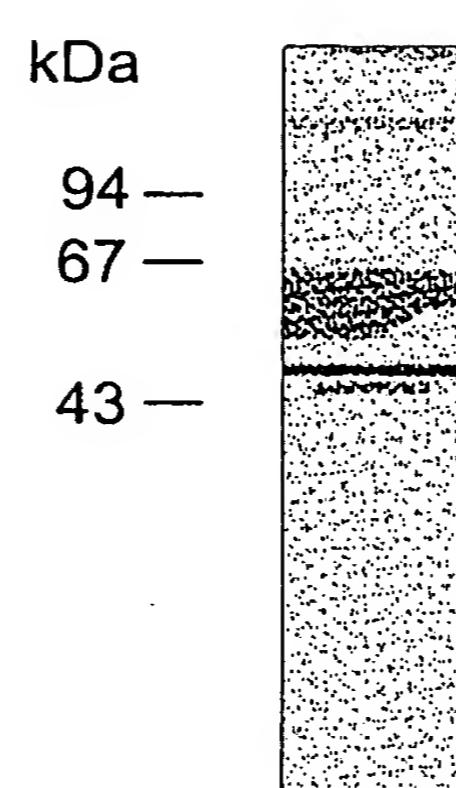
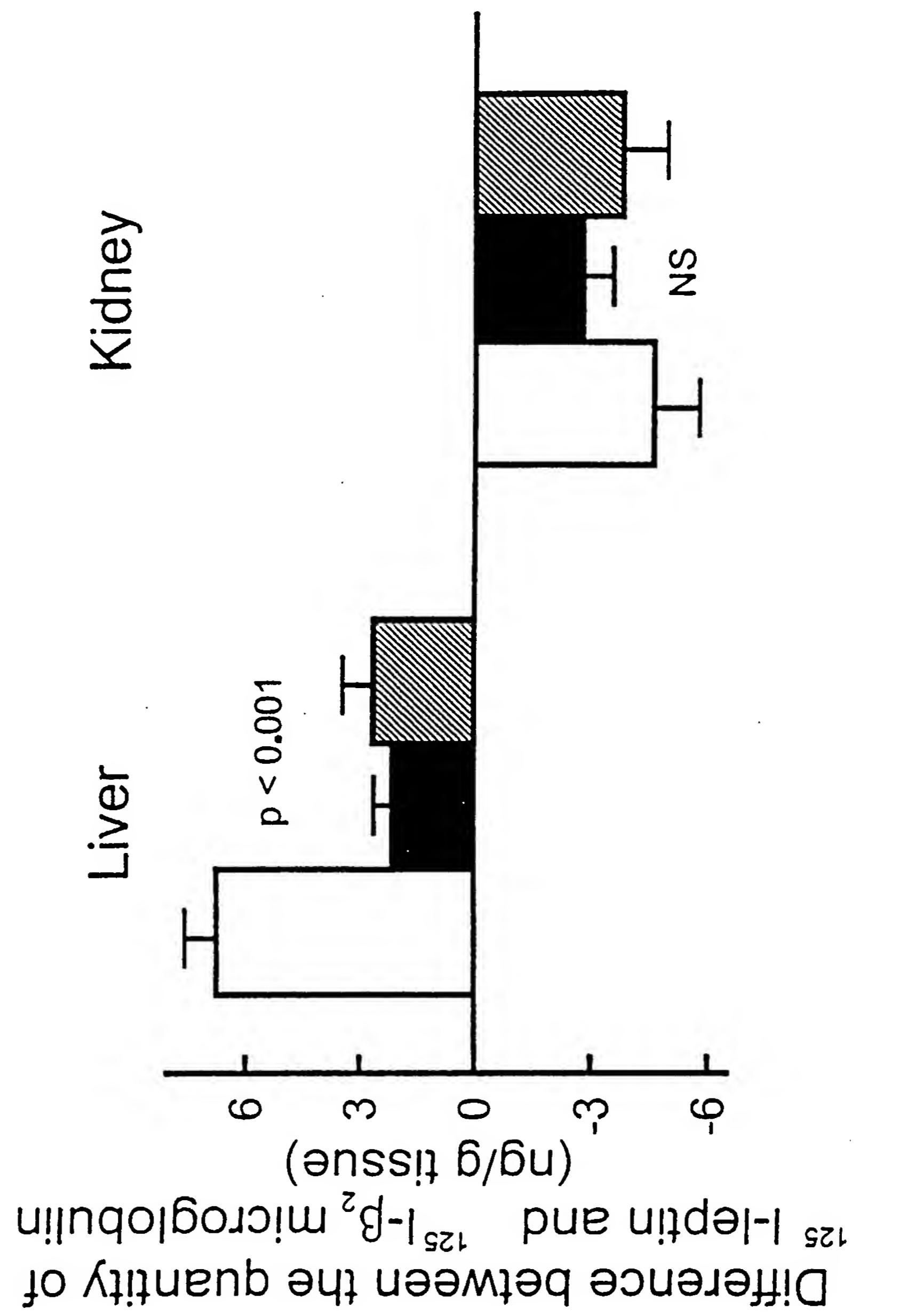


FIG. 19



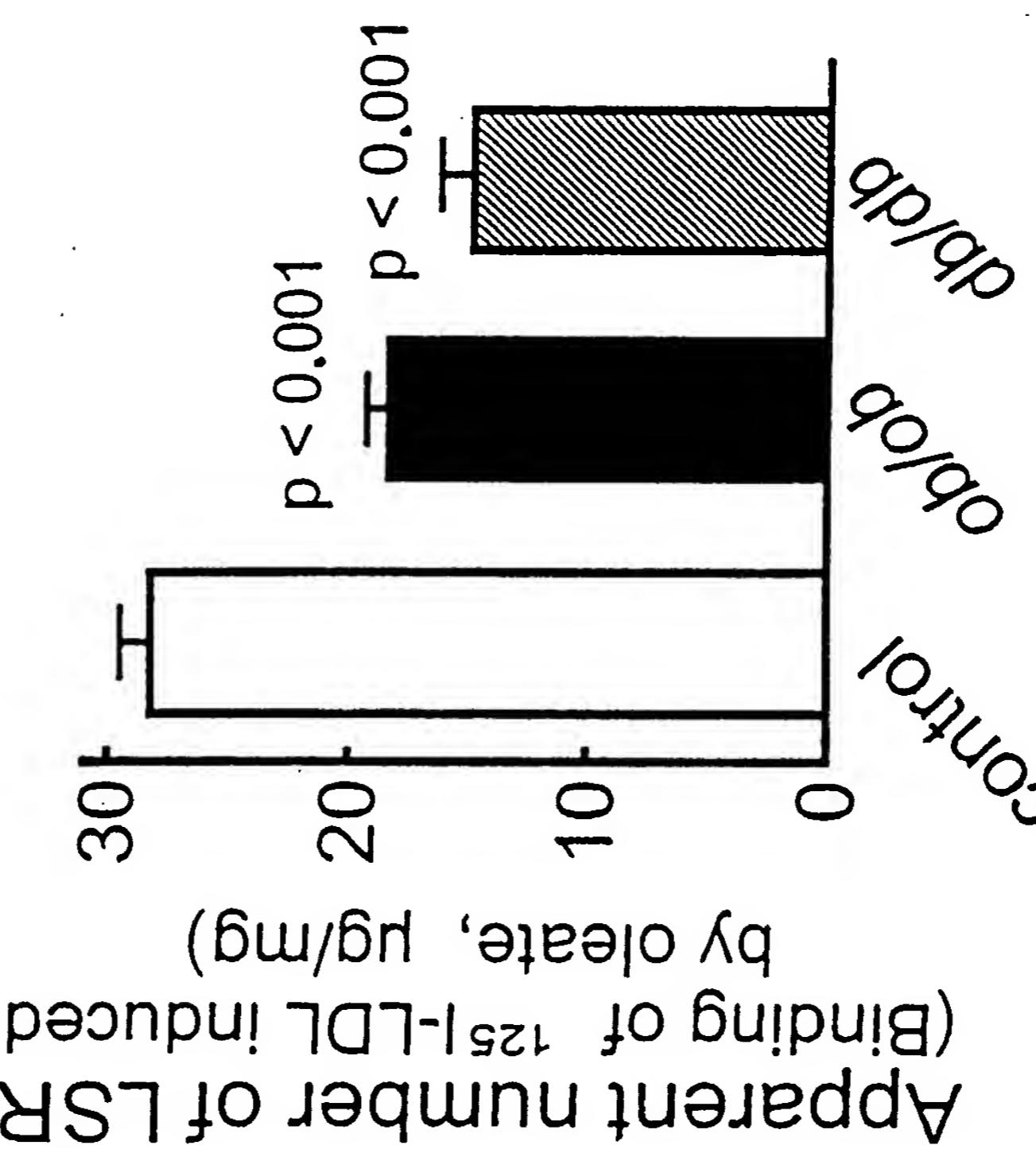


FIG. 21

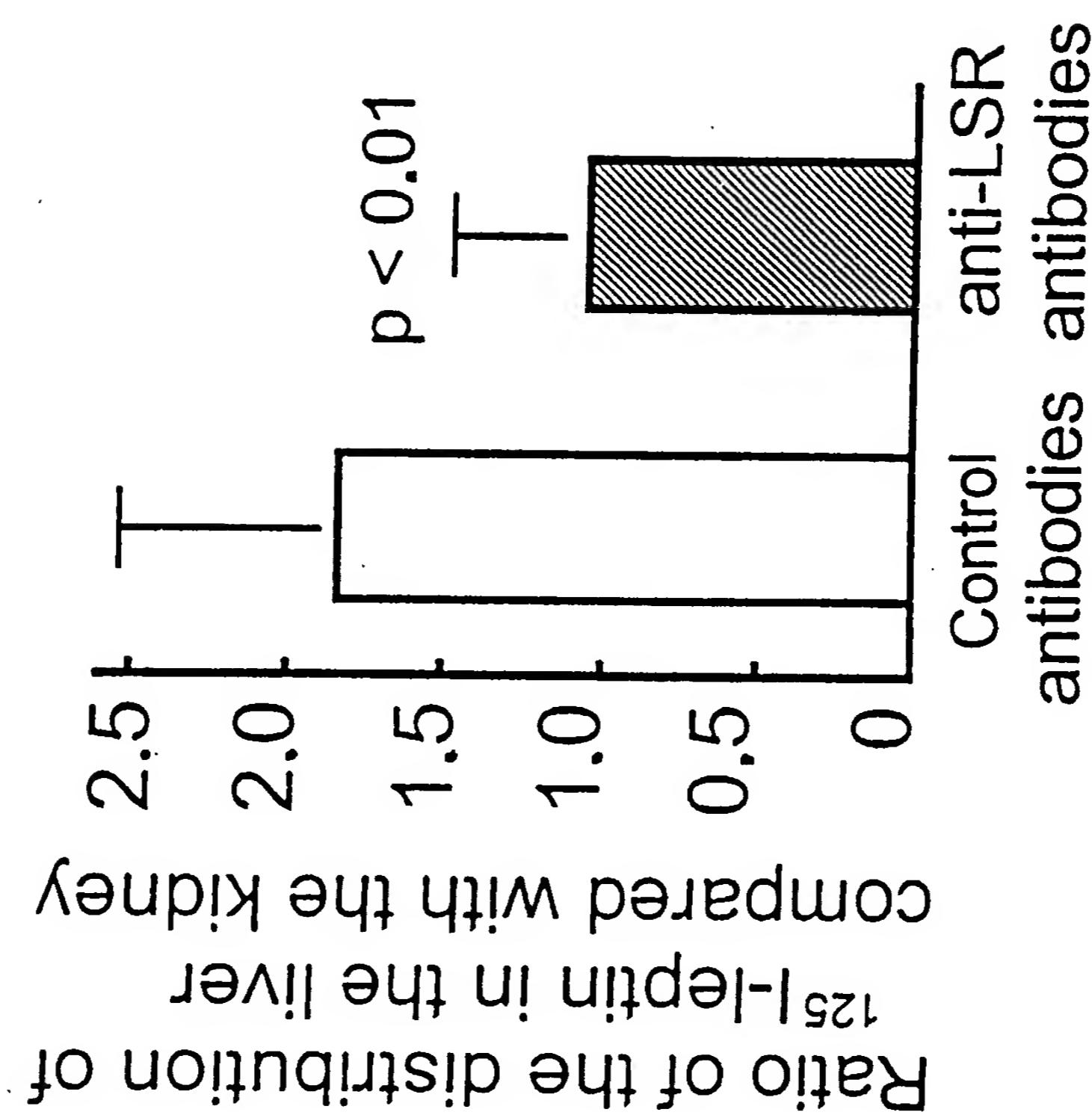


FIG. 22

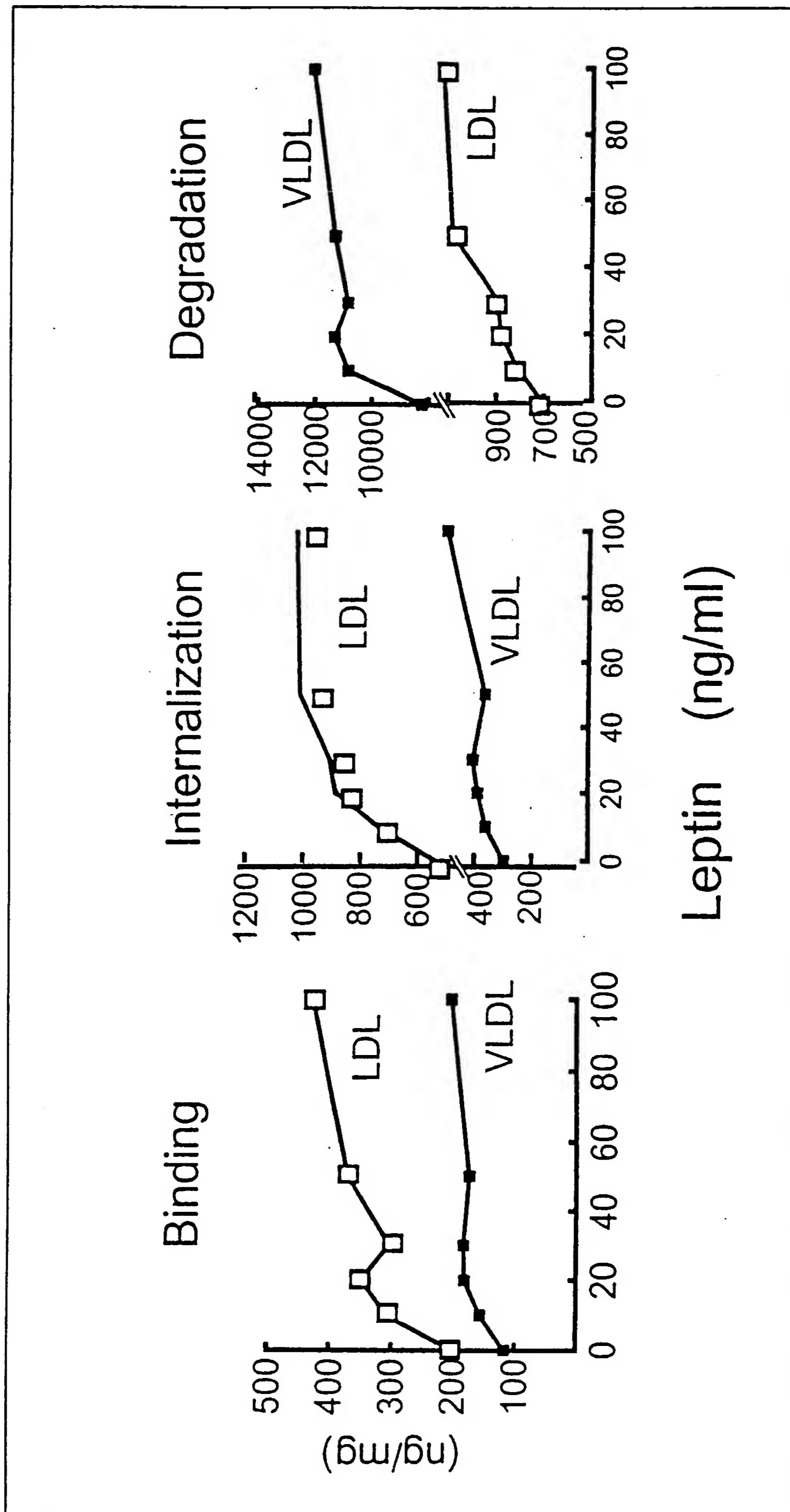
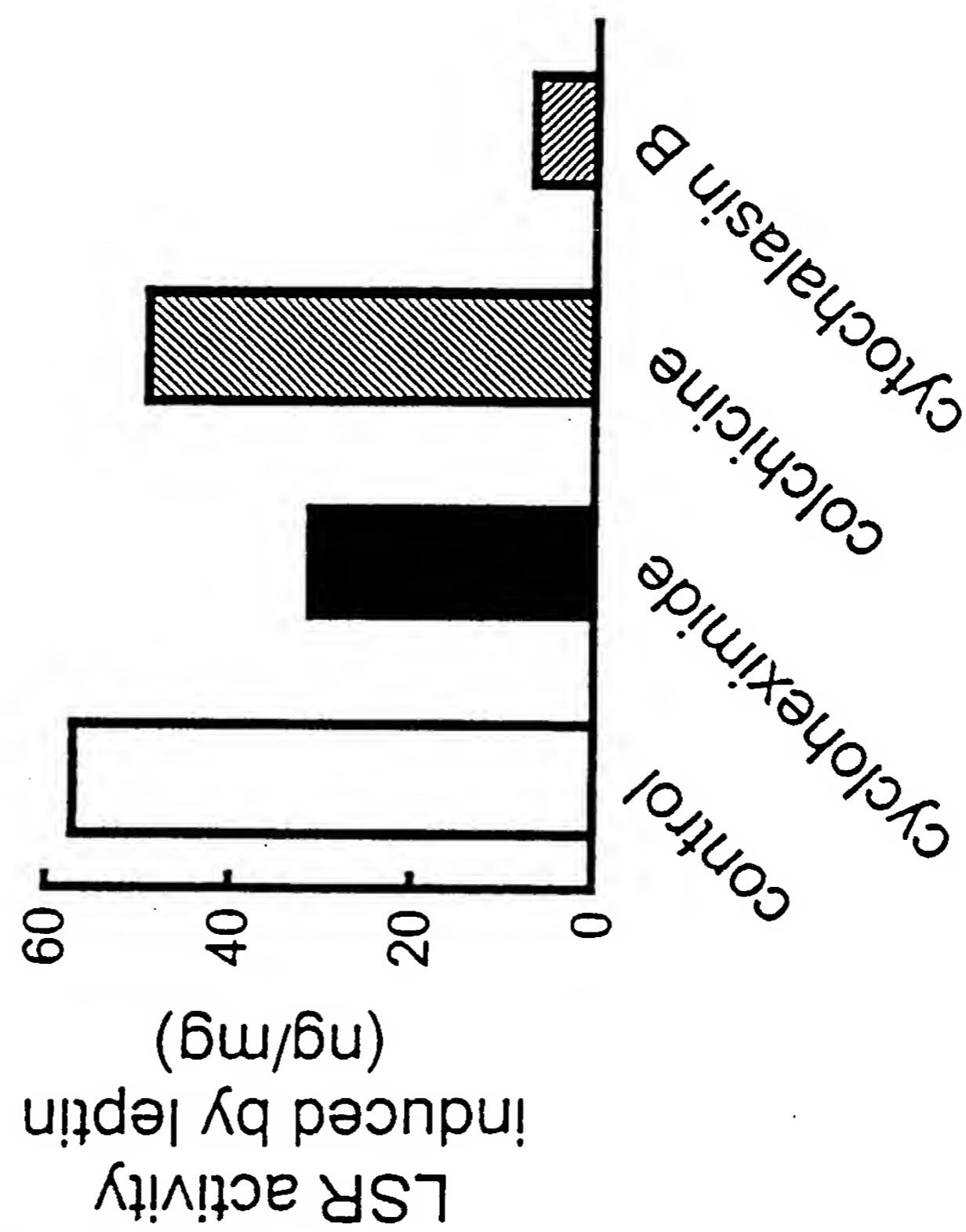
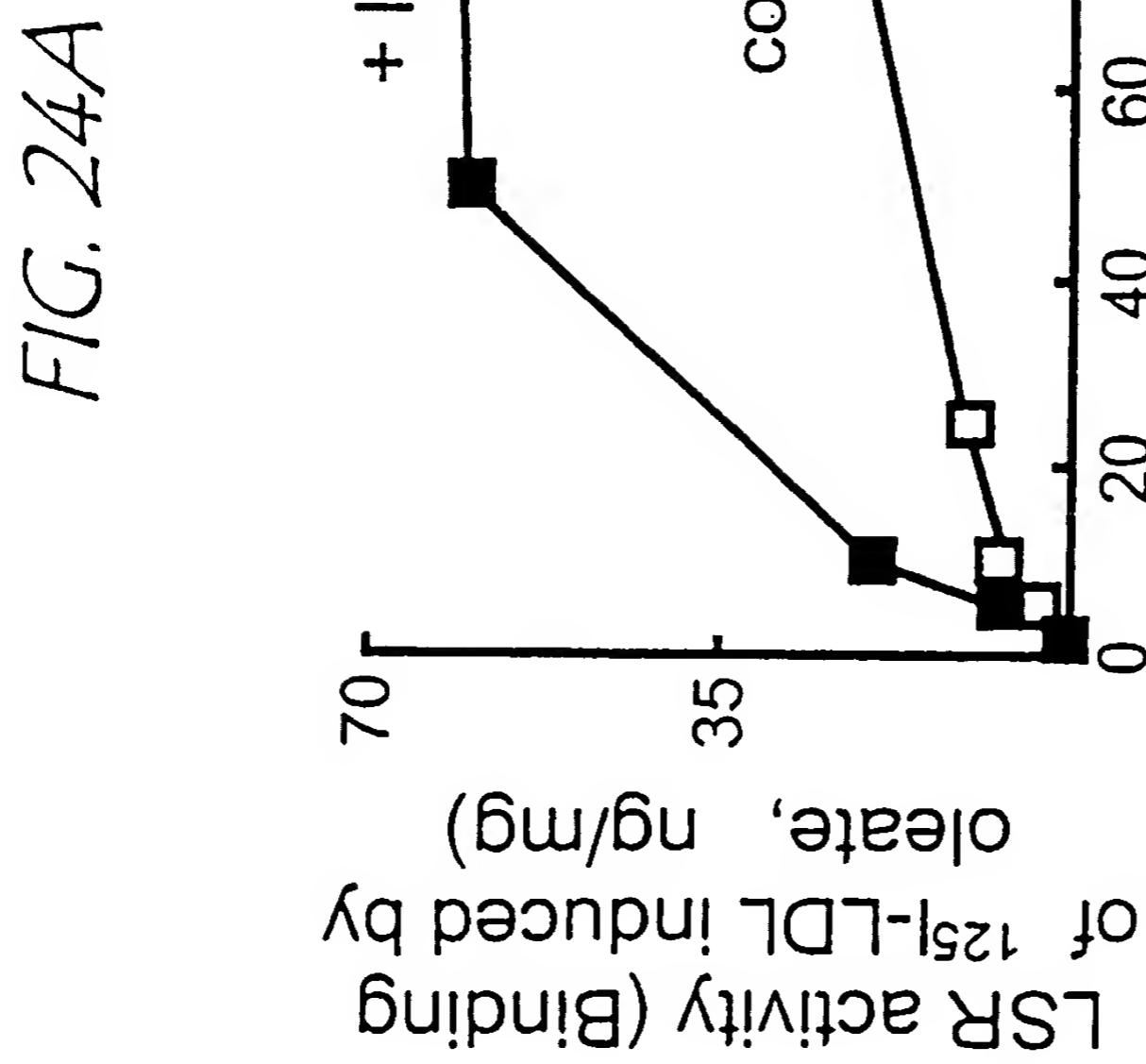


FIG. 23



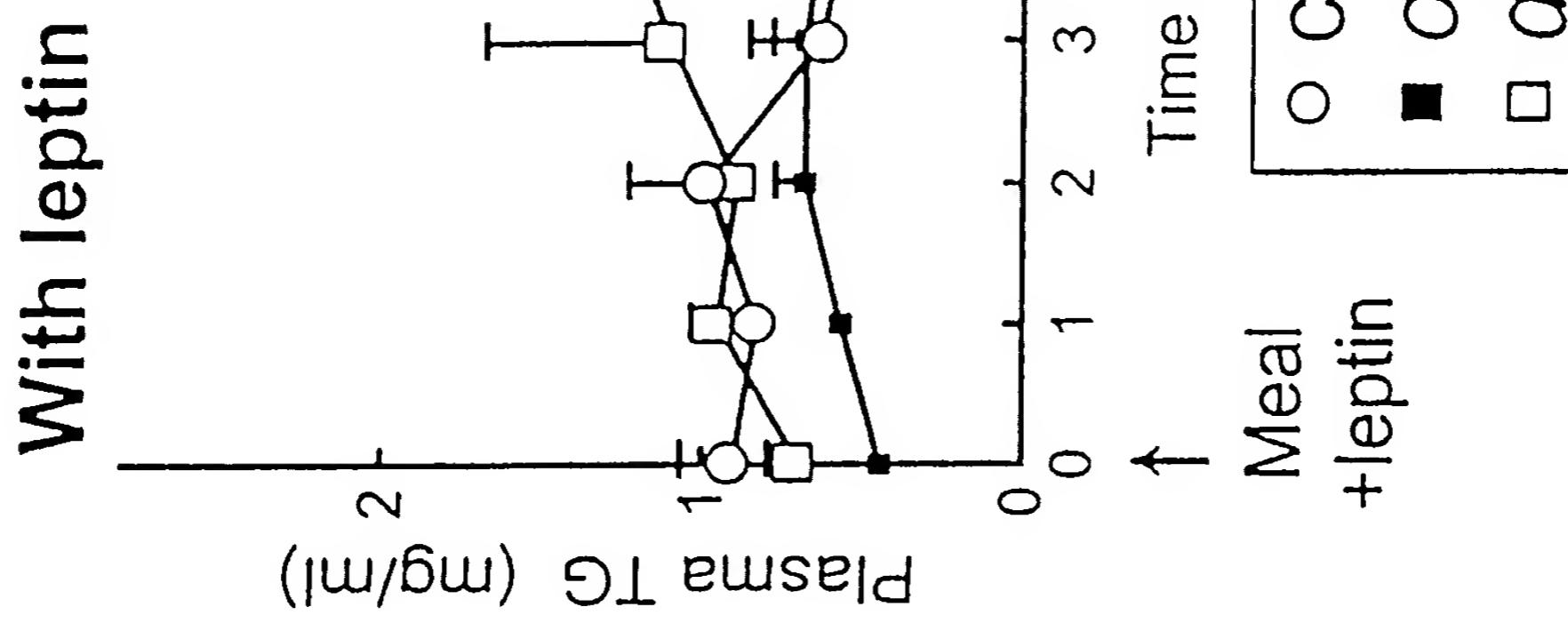
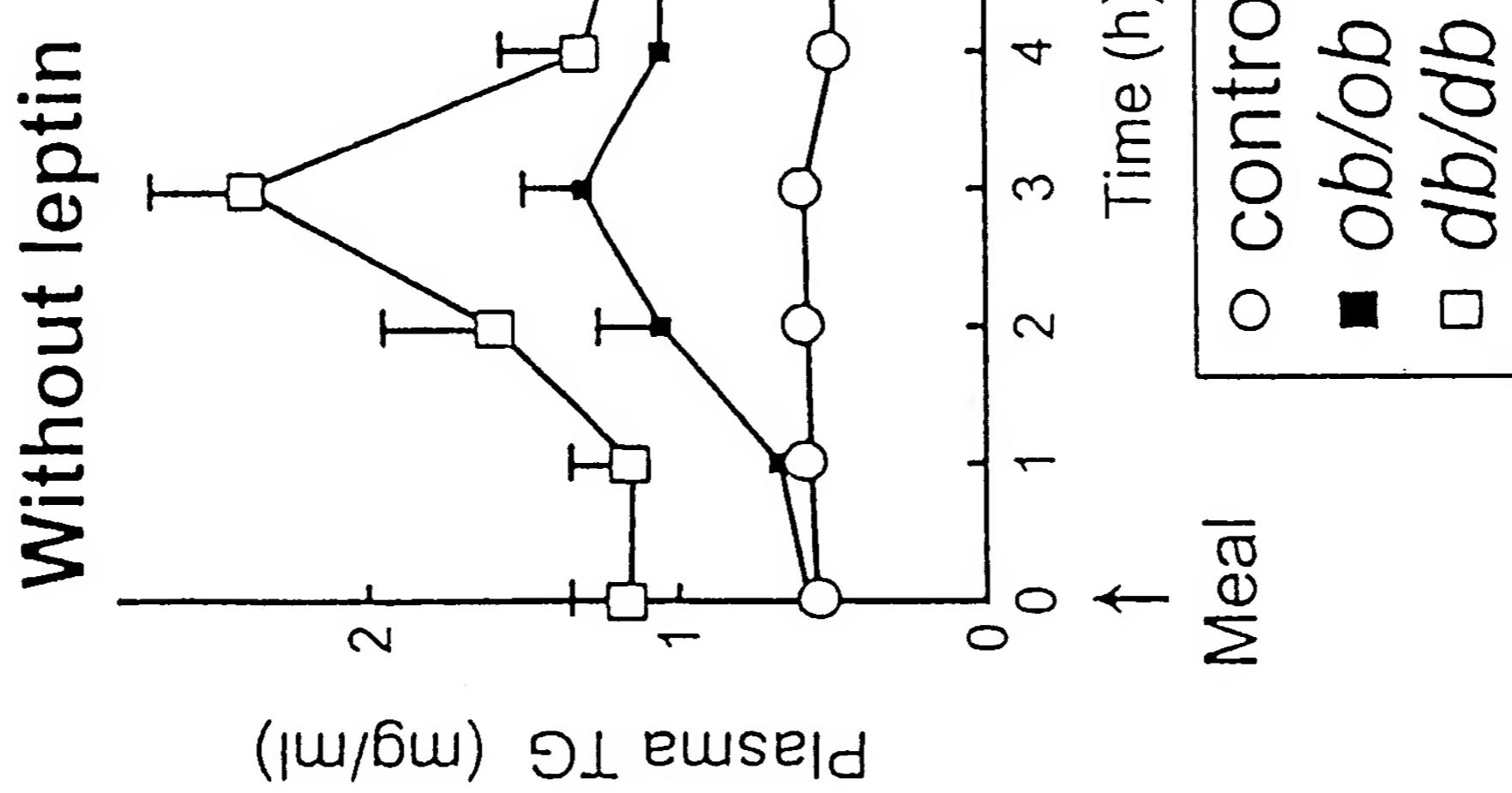


FIG. 25A

FIG. 25B

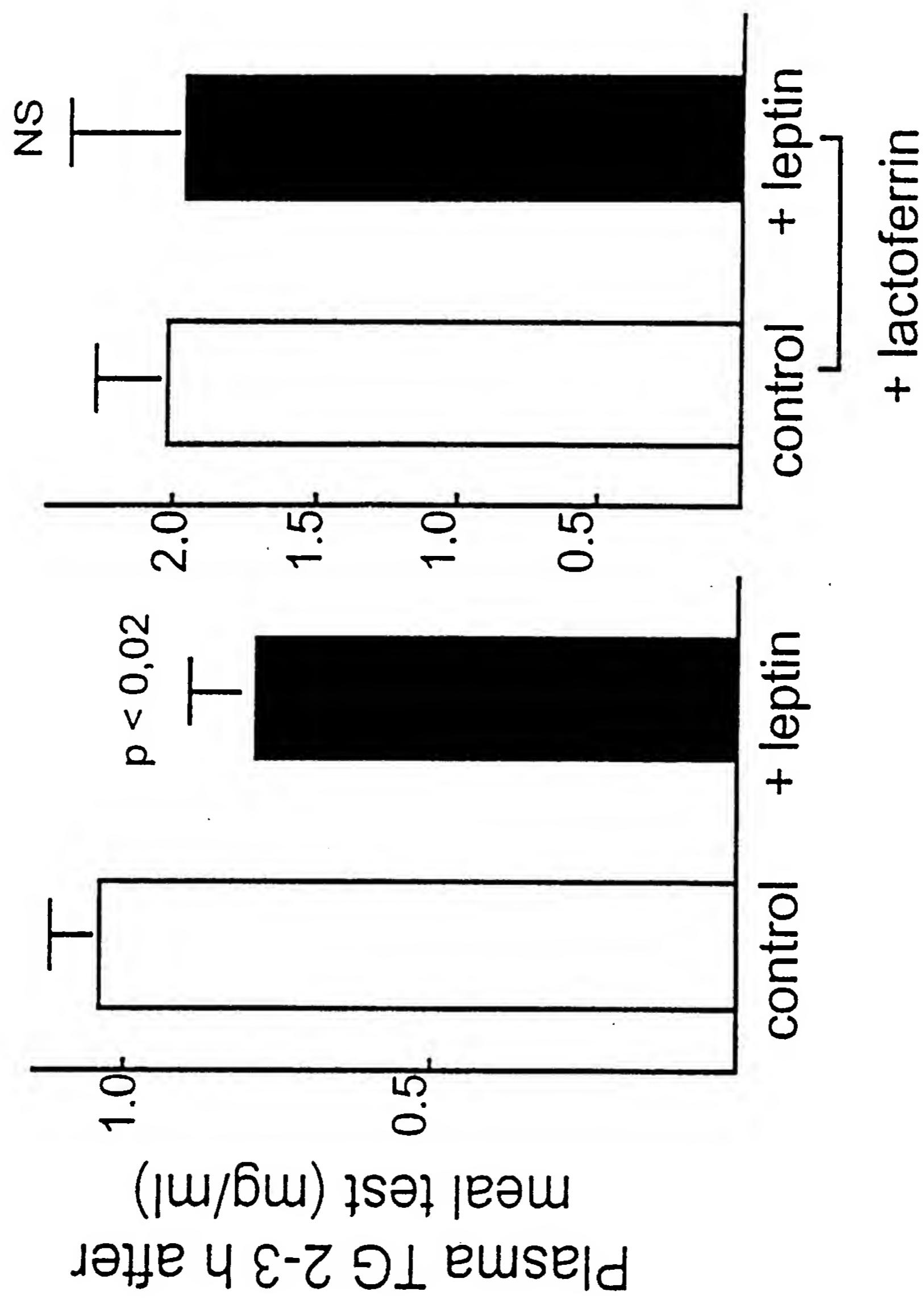


FIG. 26

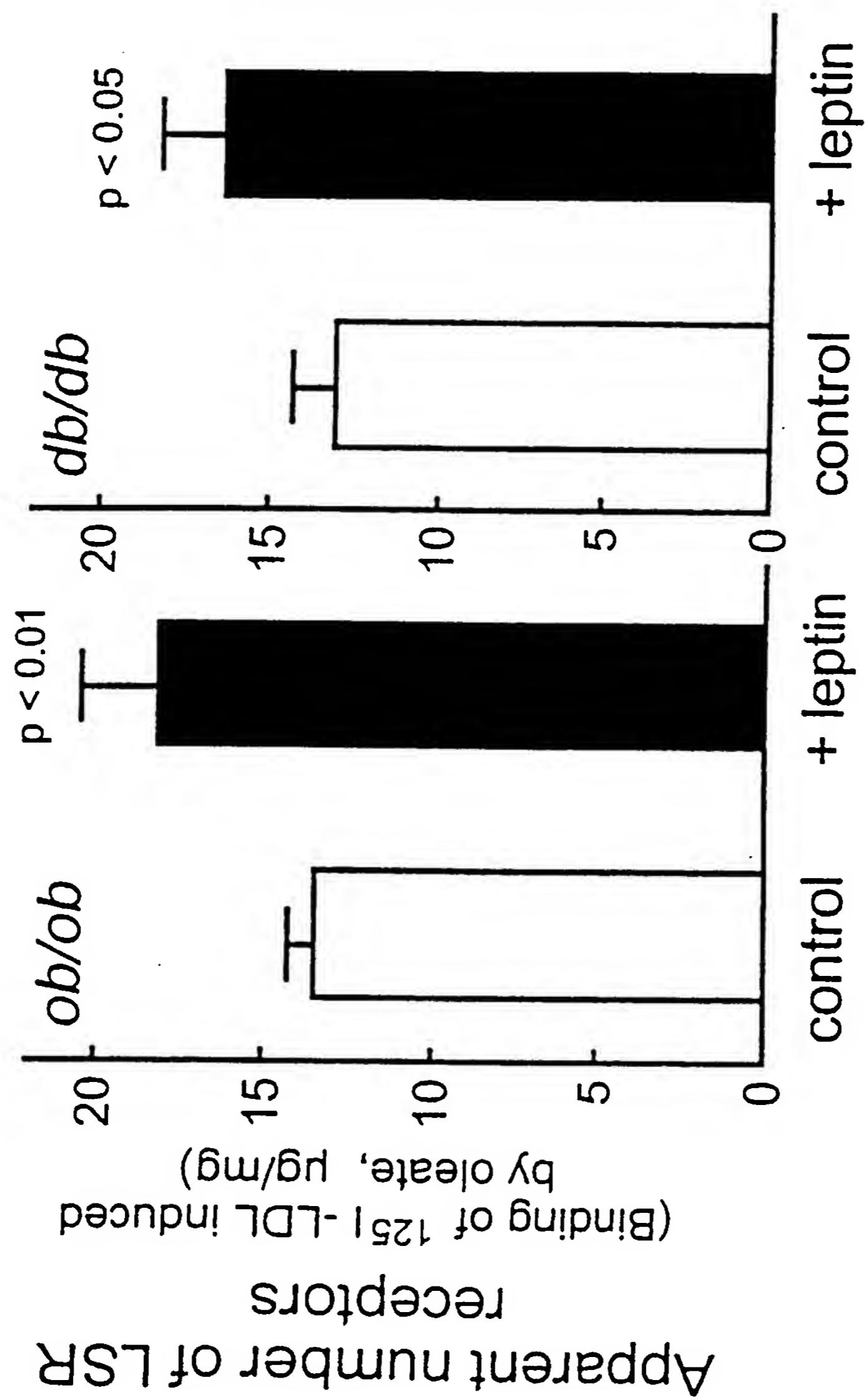


FIG. 27

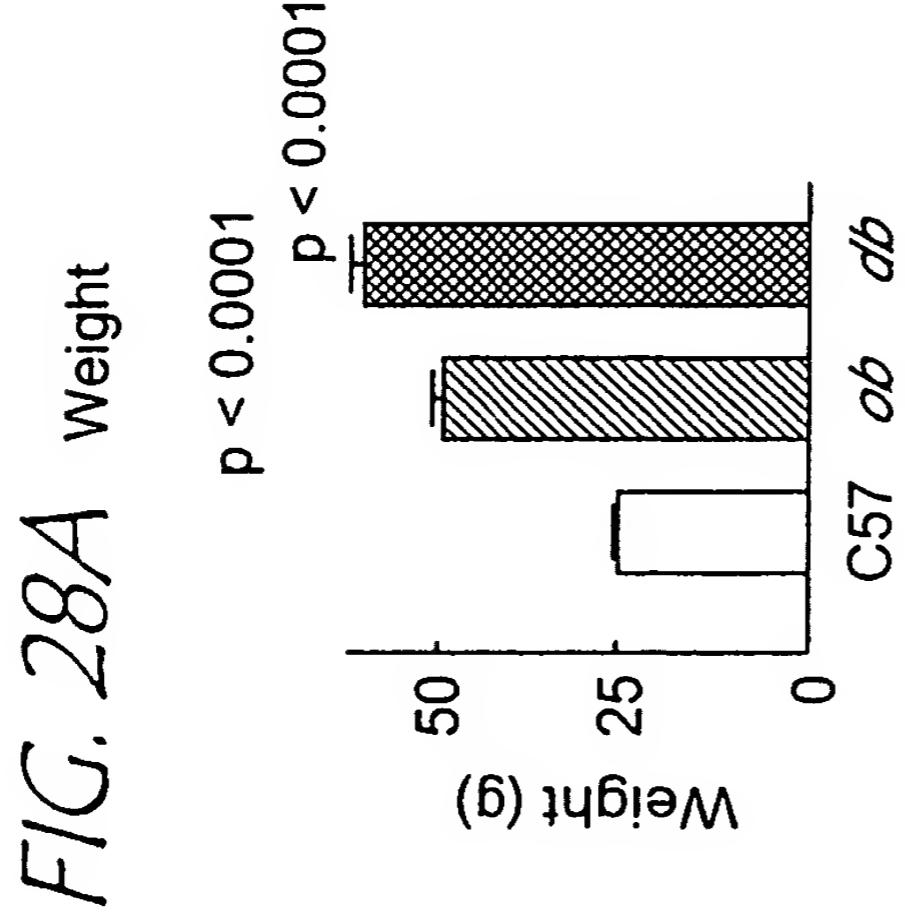


FIG. 28B Postprandial lipemic response

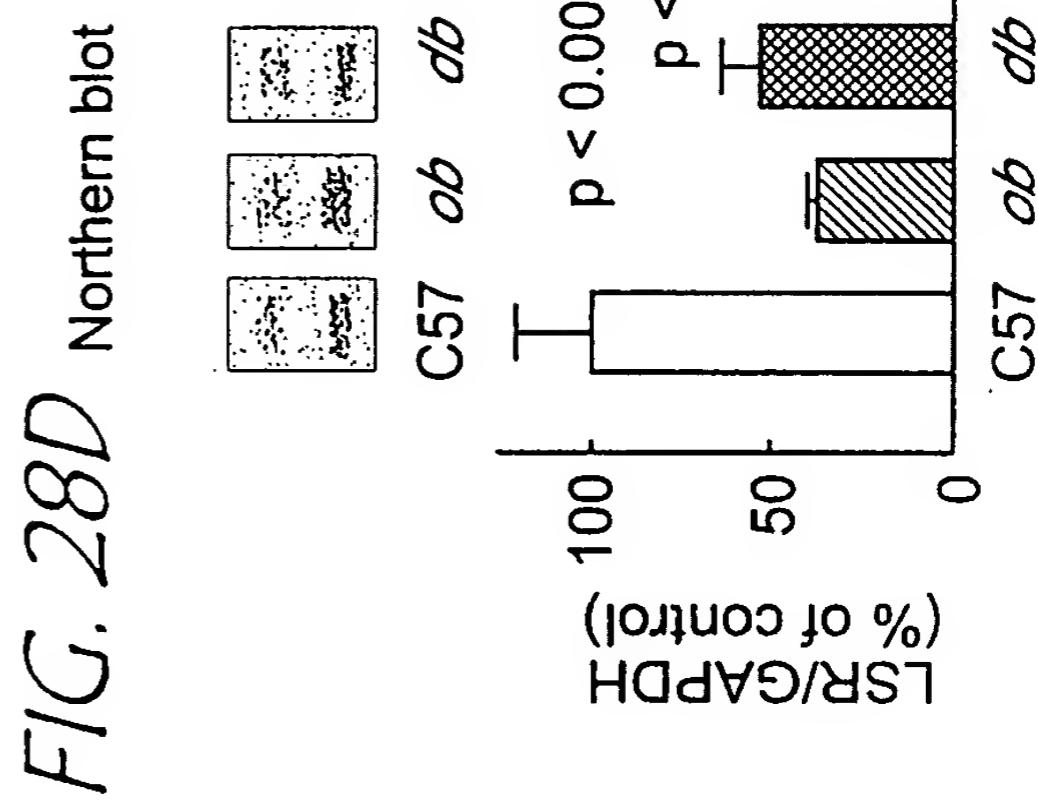
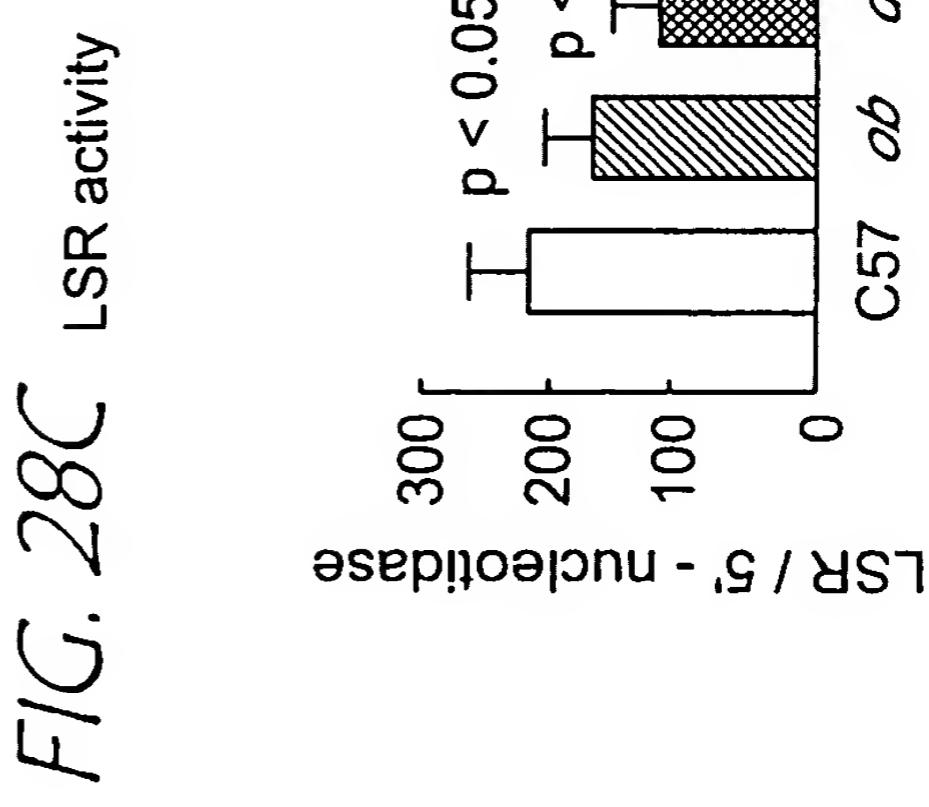
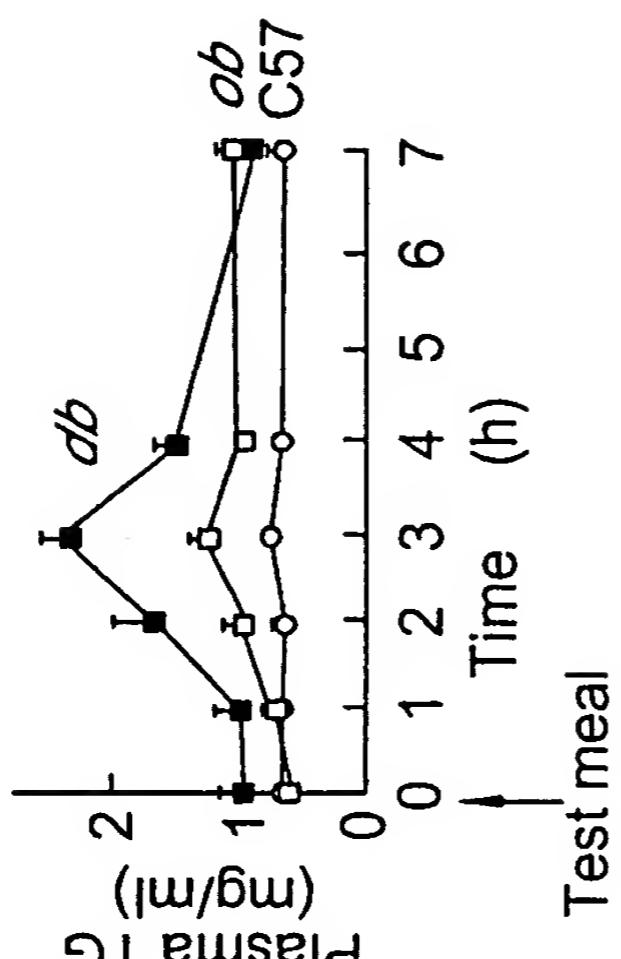


FIG. 29A Weight

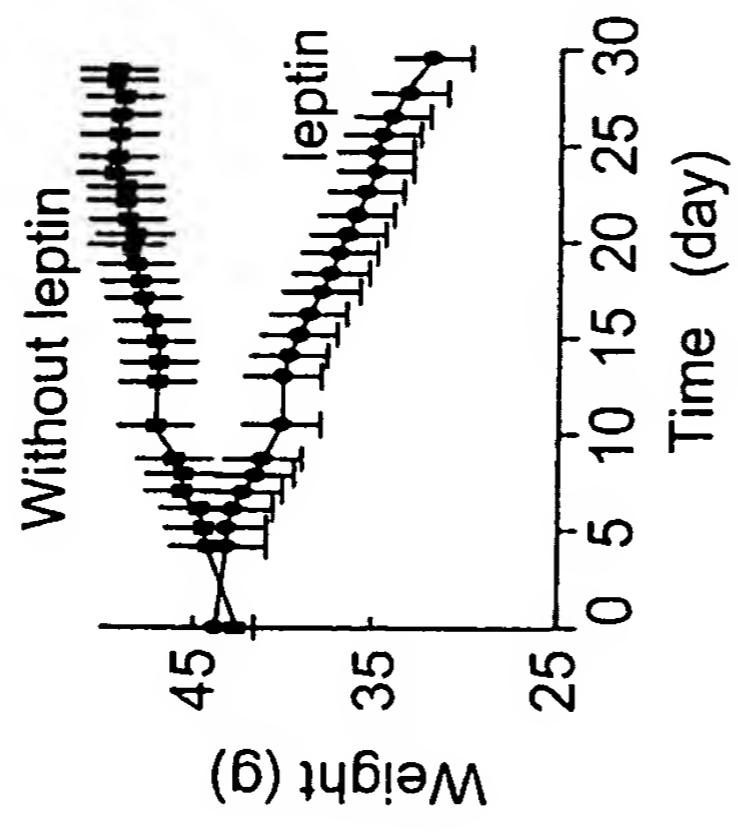


FIG. 29B Postprandial lipemic response

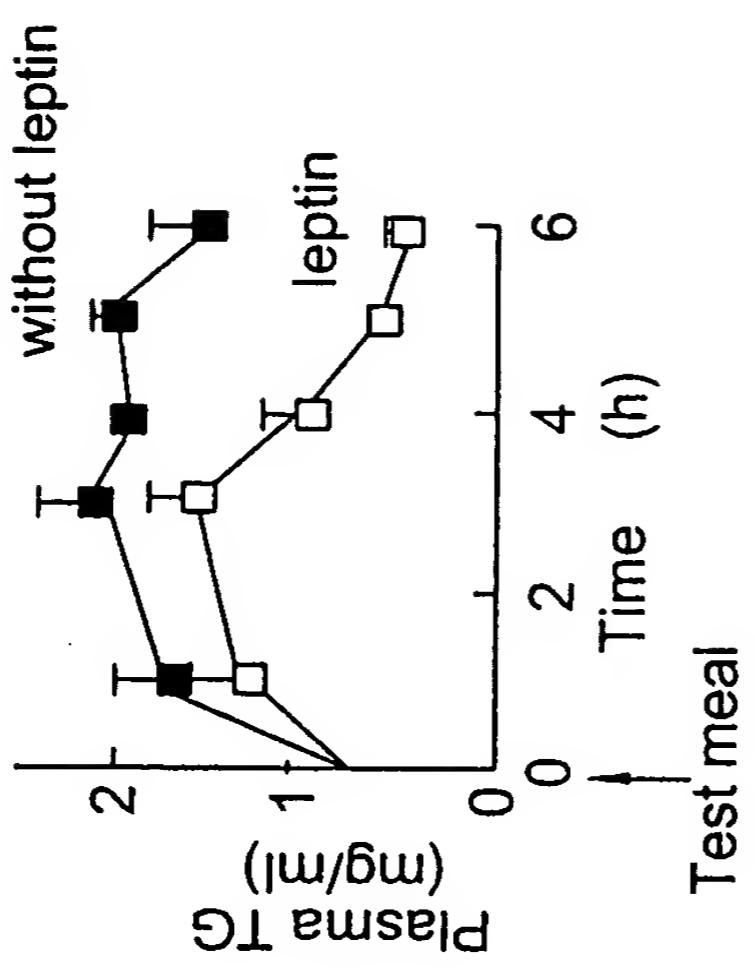


FIG. 29C LSR activity

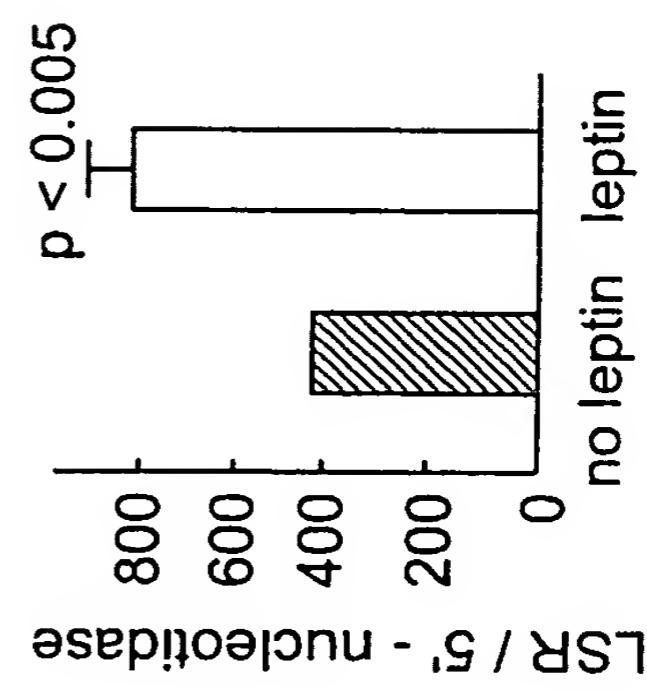
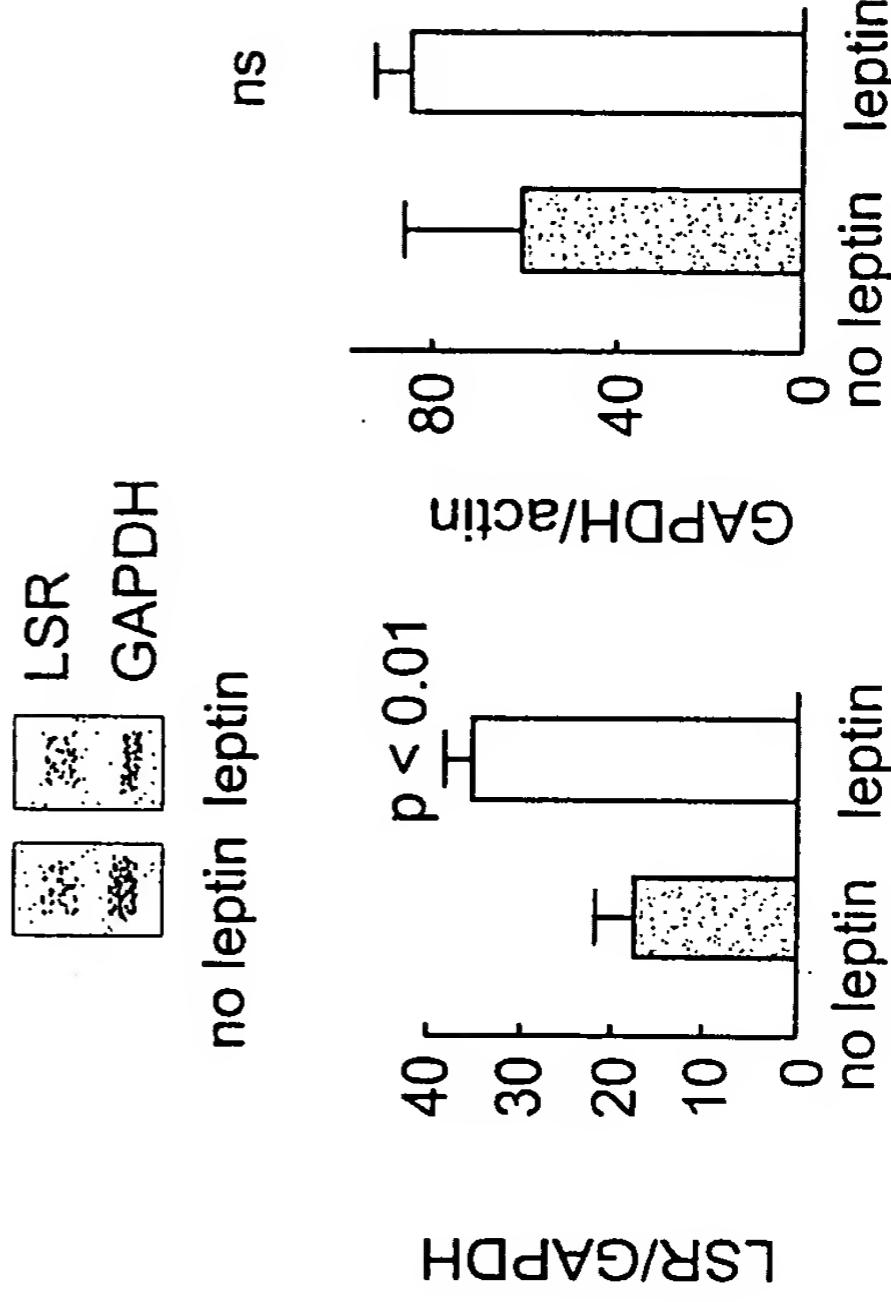


FIG. 29D Northern blot



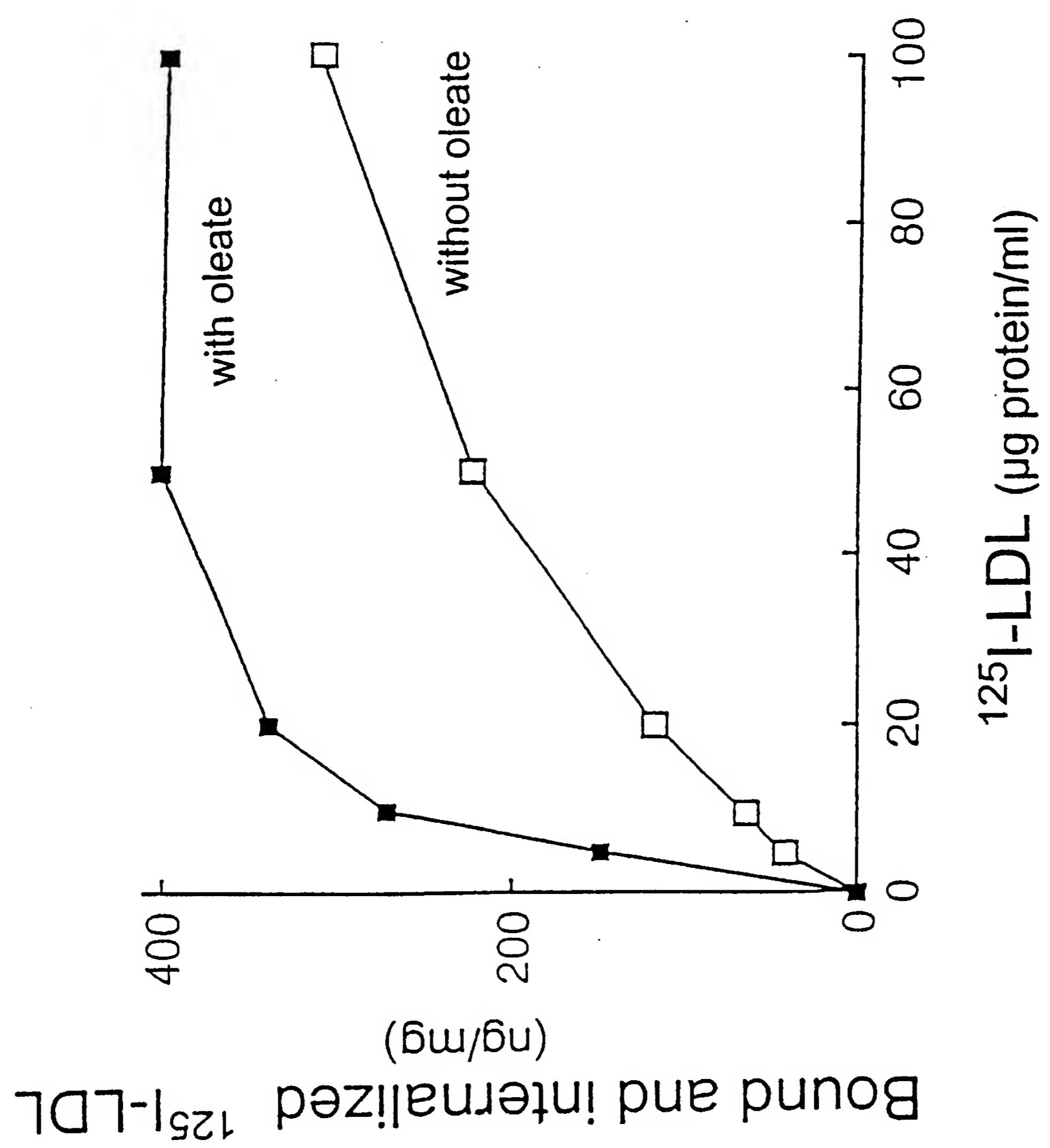


FIG. 30

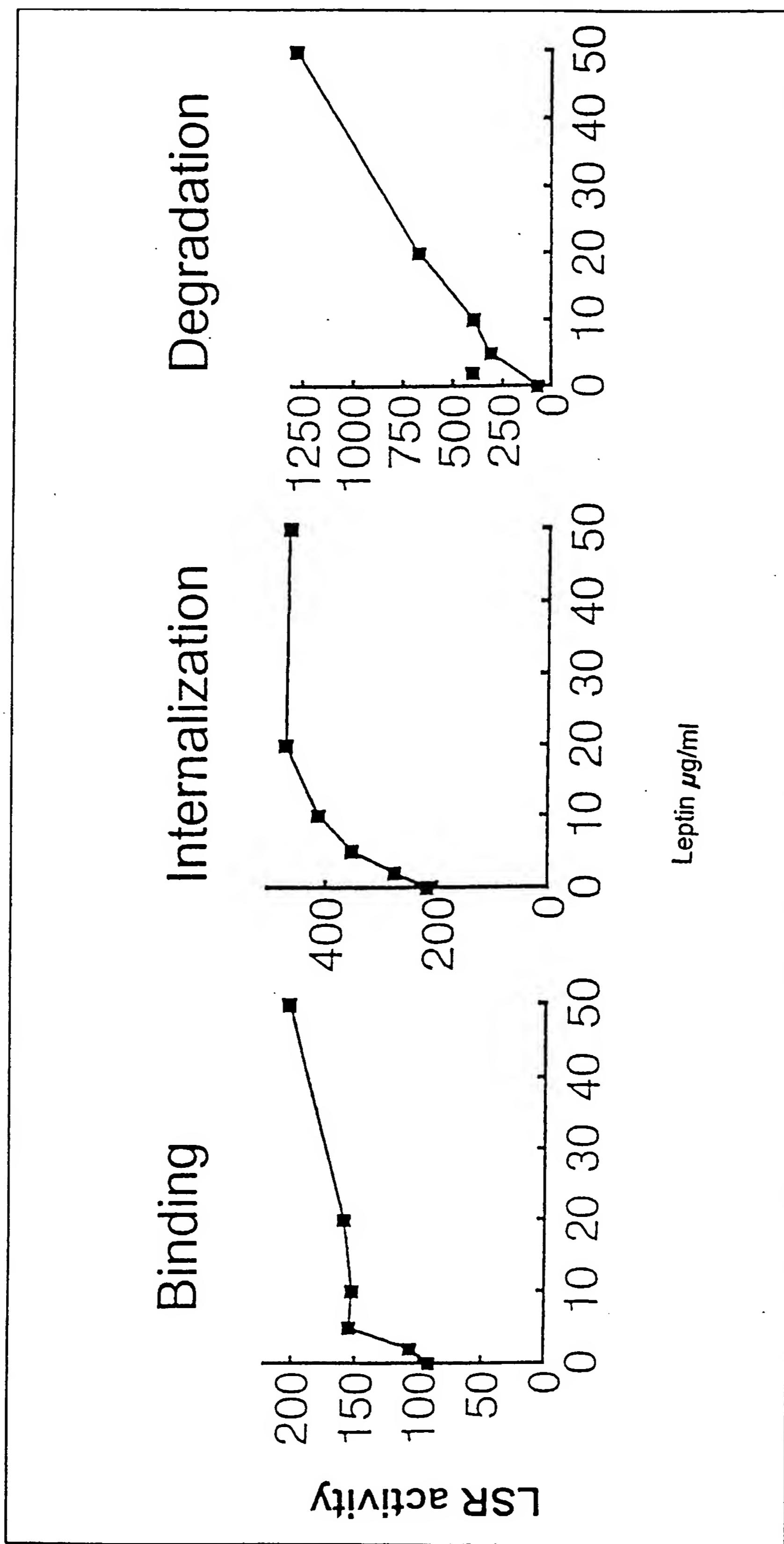


FIG. 31

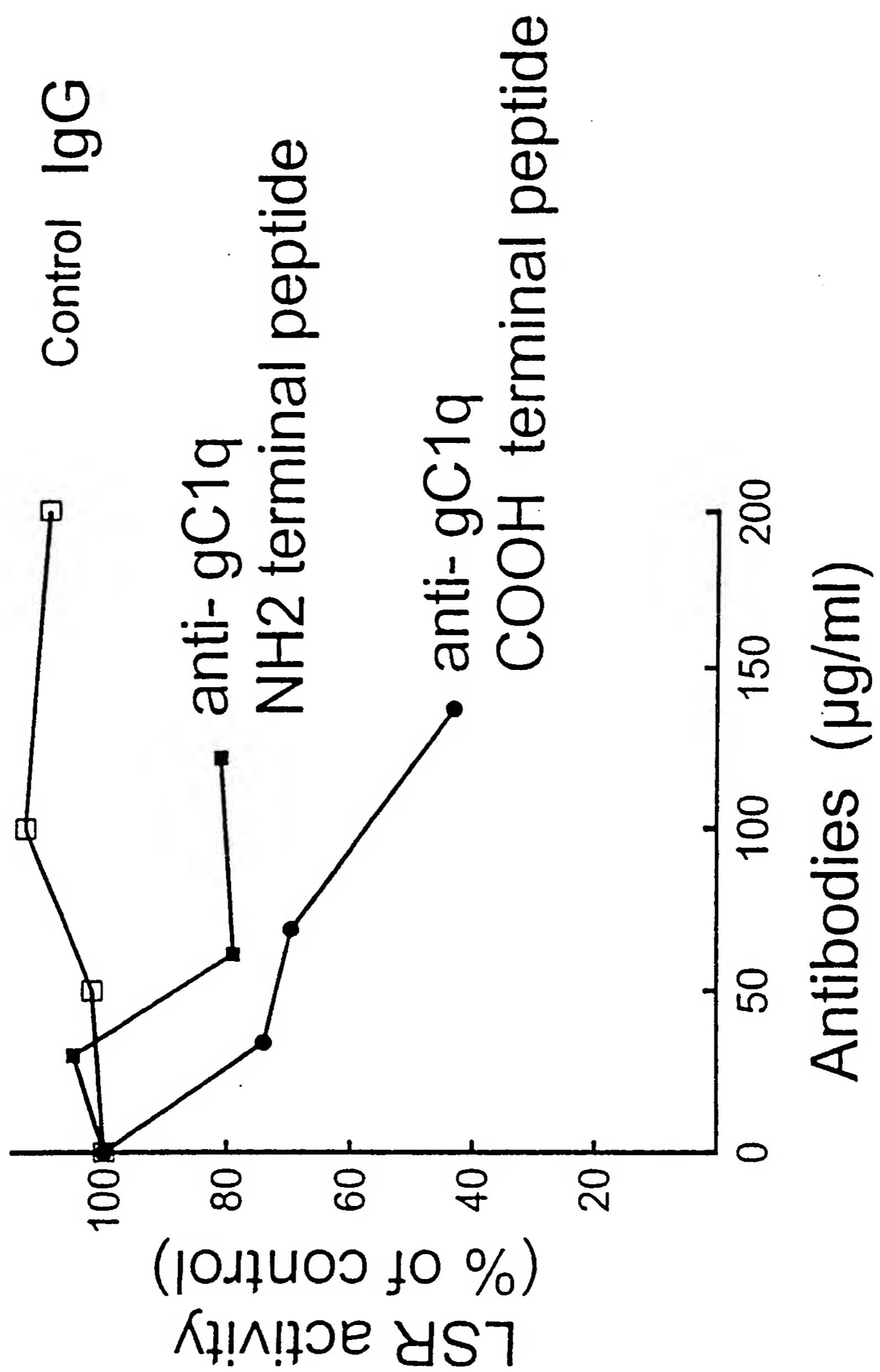


FIG. 32

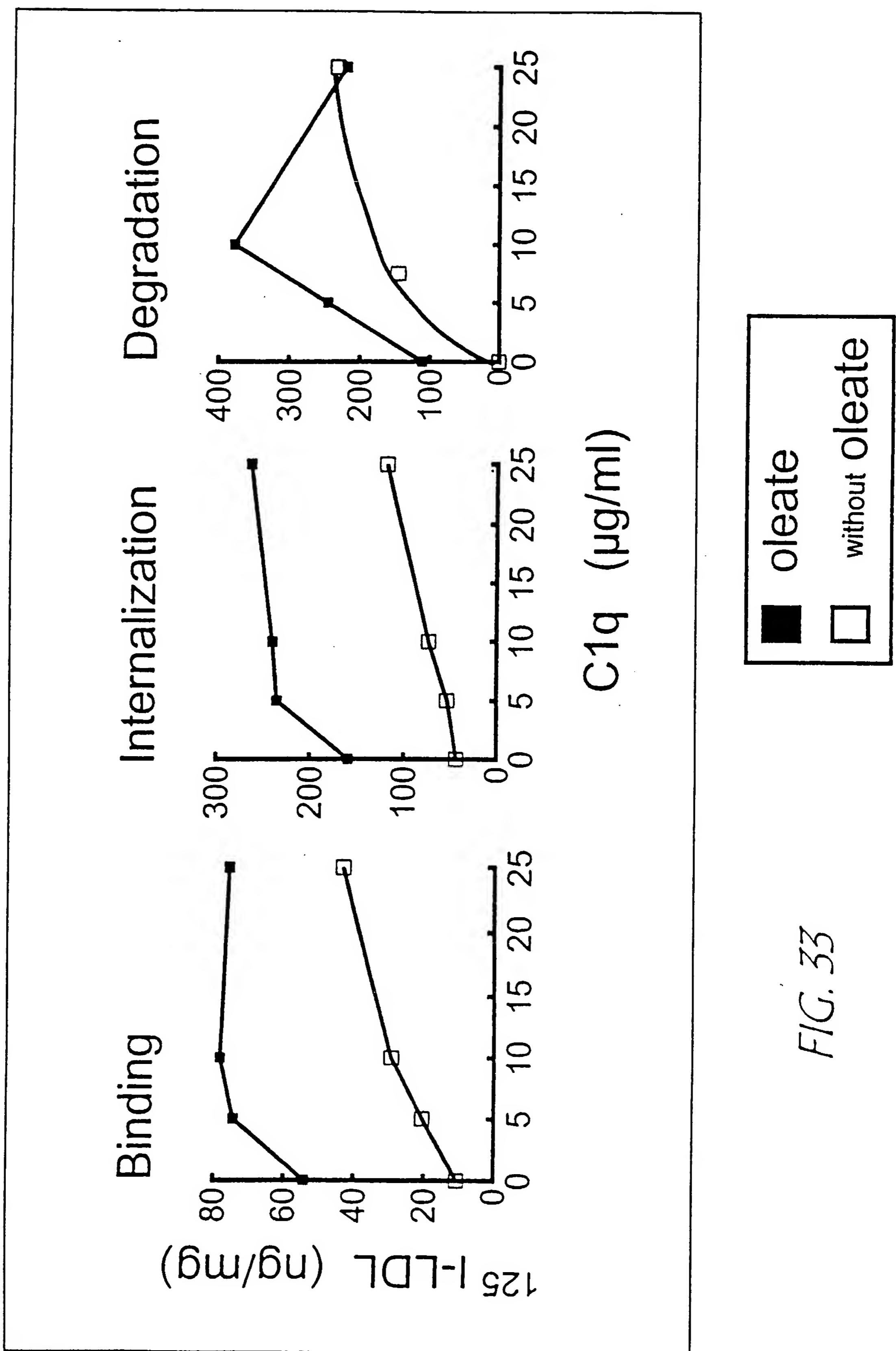


FIG. 33

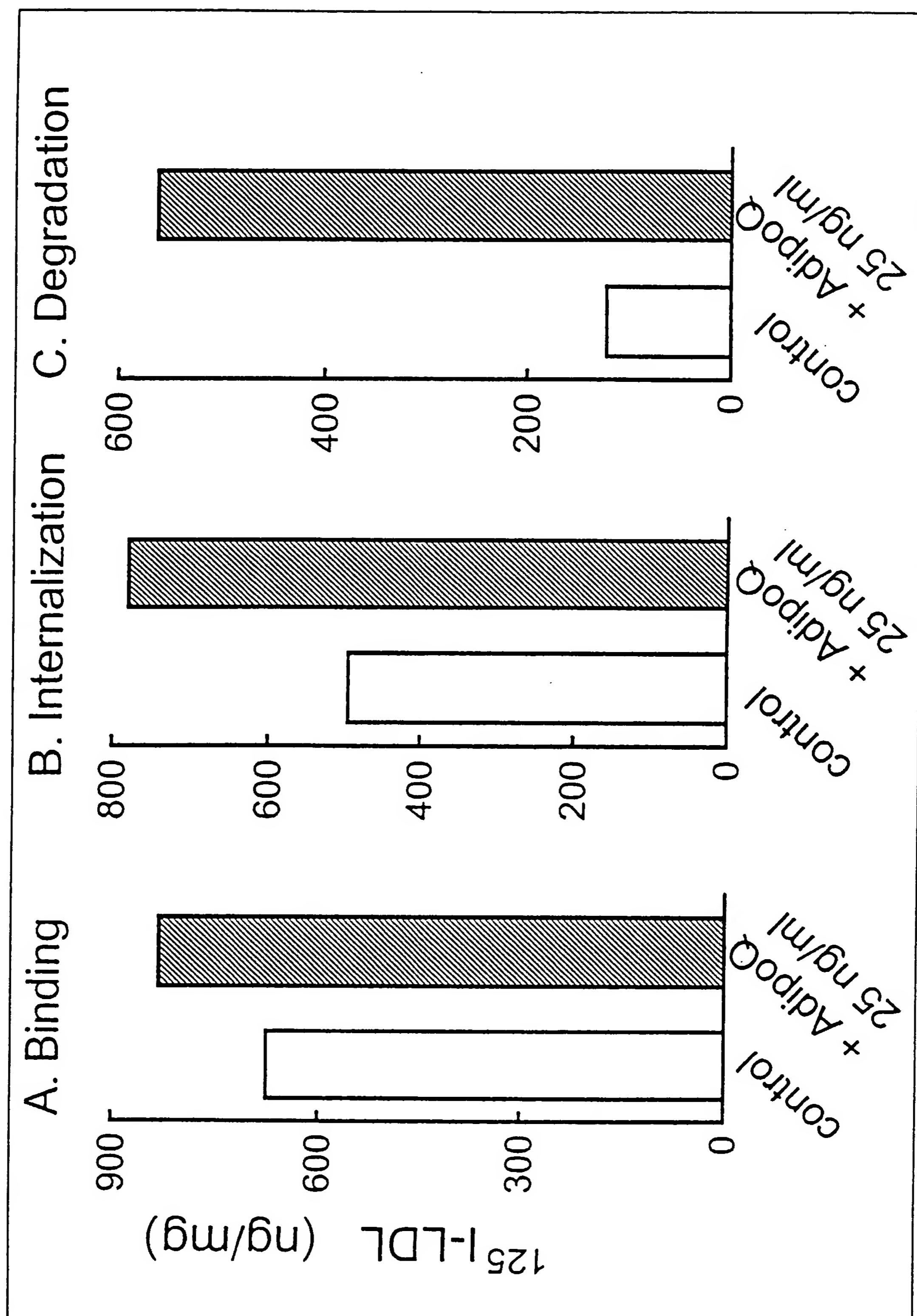


FIG. 34

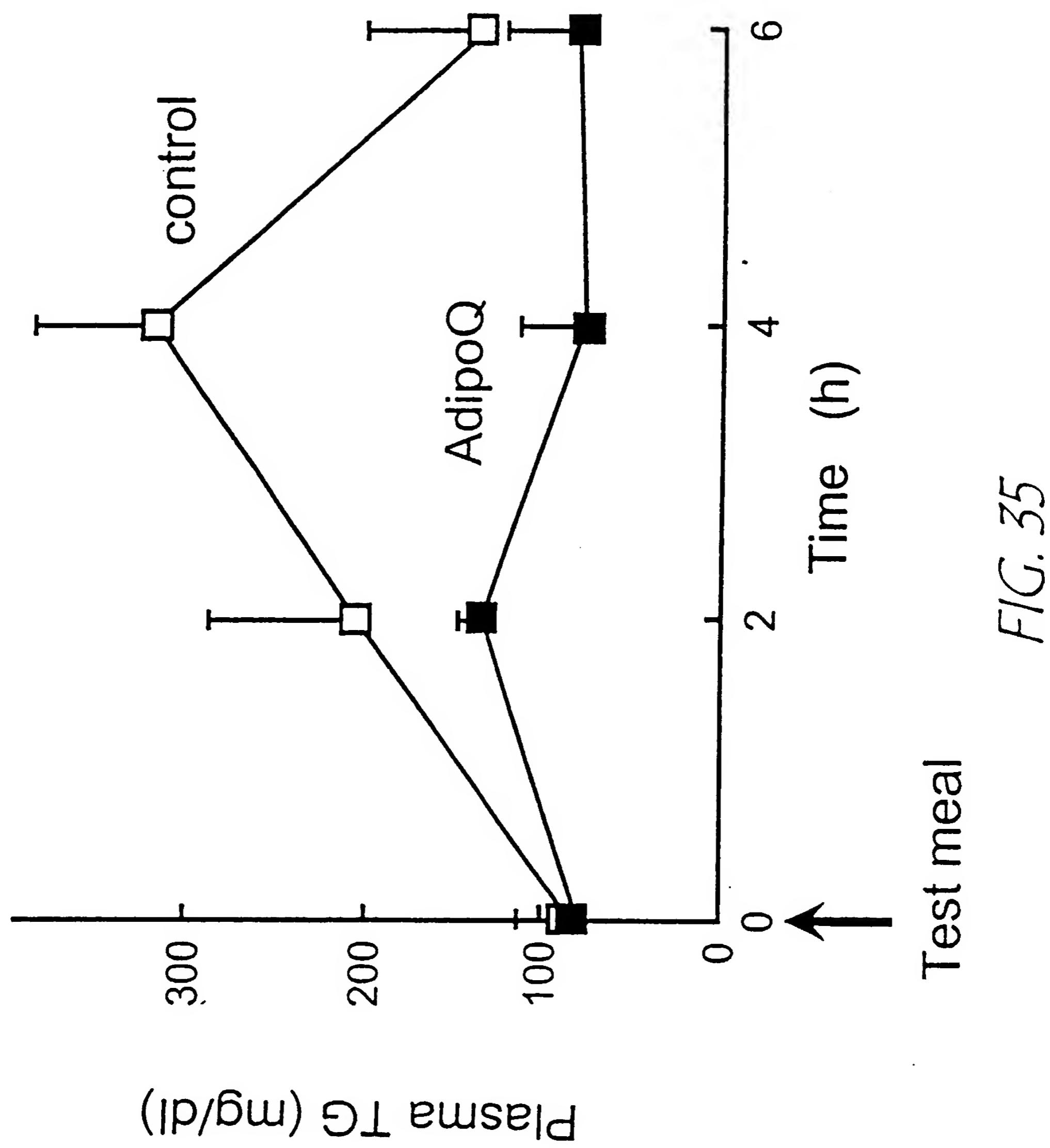
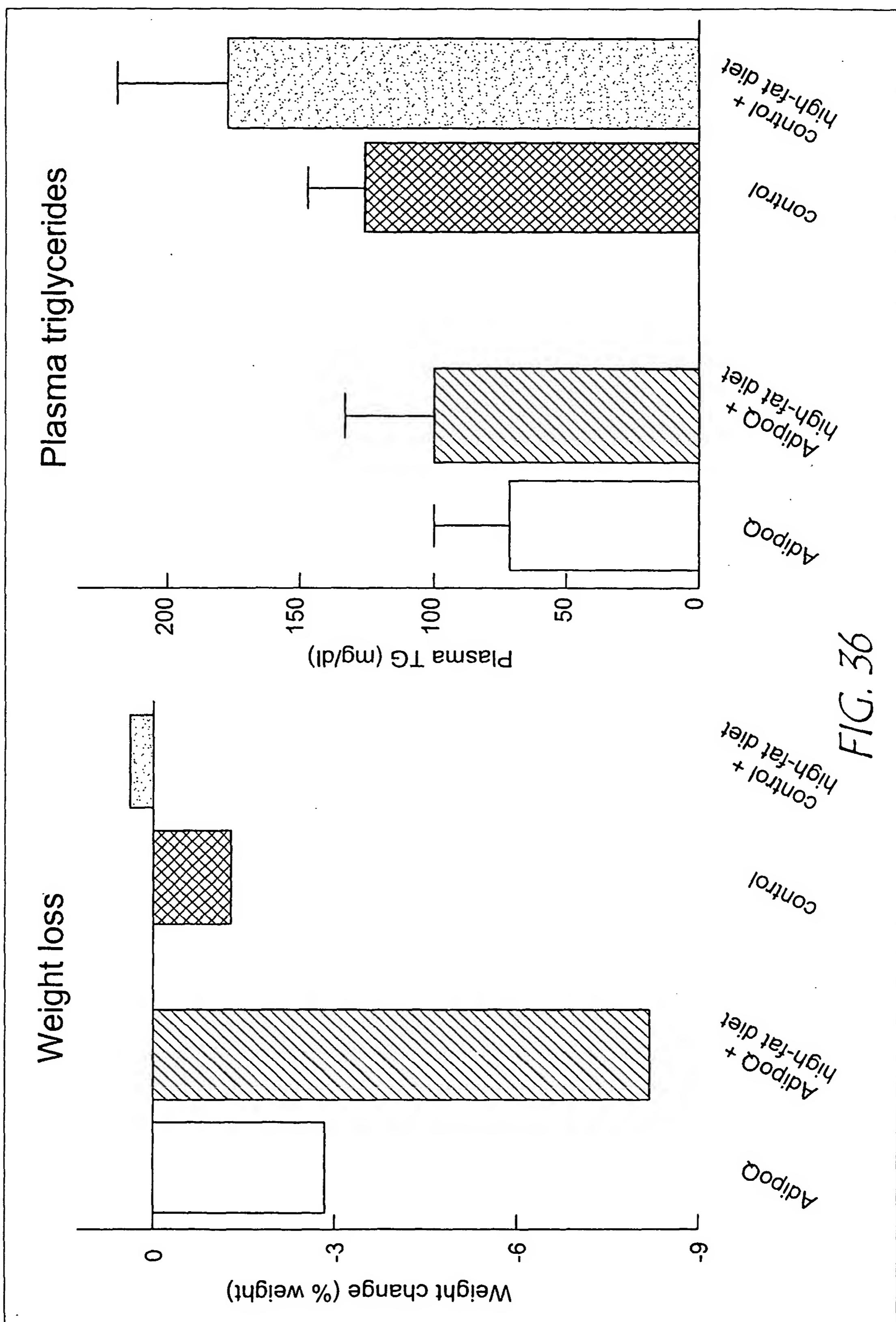


FIG. 36



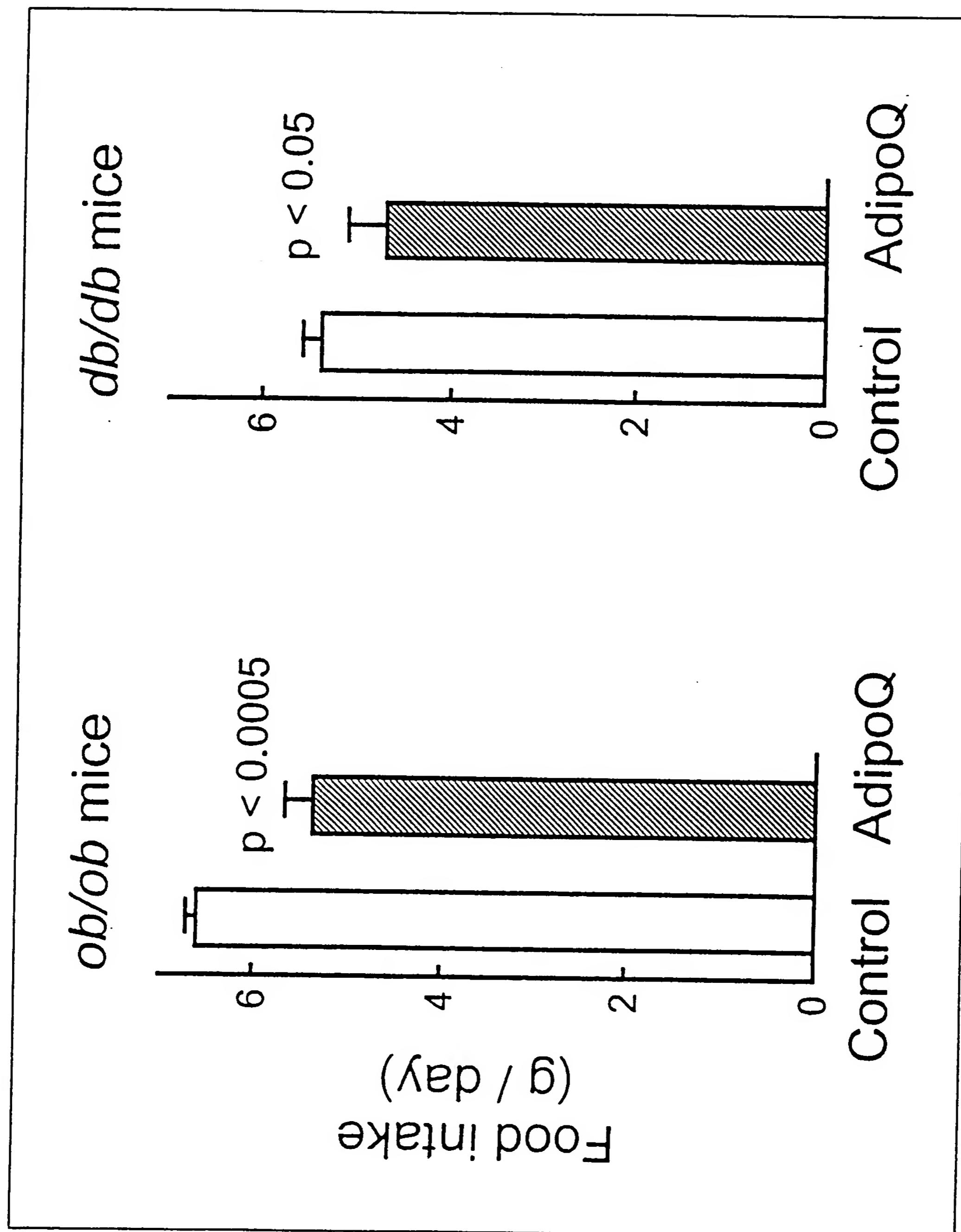


FIG. 37